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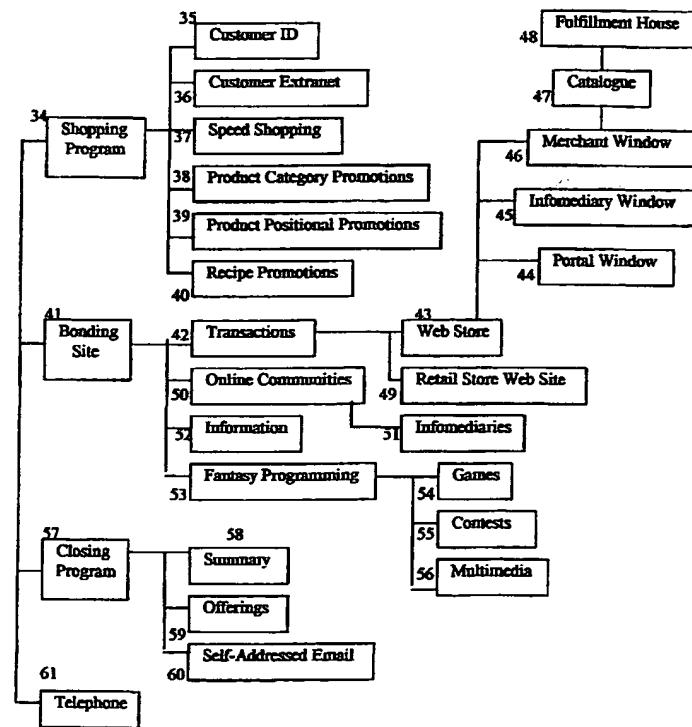
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(54) Title: INTEGRATED COMMERCE ENVIRONMENT (ICE) - A METHOD OF INTEGRATING OFFLINE AND ONLINE BUSINESS



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Diagram of Exemplary Shopping Cart Computer (SCC) Functions

(57) Abstract: The present invention includes the following: 1) A commercial web site or Web Store, the homepage of which permits customers to purchase products and services (commodities) and be hyperlinked to a portal web site's URL (Uniform Resource Locator); 2) A system for leading a customer in a retail or other type of business to the Web Store by providing the customer with at least one promotional message on signage, posters and/or as a sales receipt. Typically, the message includes at least the Web Store's URL, and a promotion (38) targeted to the customer; 3) A means of using a computer-based system that acts as an intermediary between customers, retail merchants, wholesalers, fulfillment houses, vendors, and one or more Internet portal companies in a way that adds value to each of the respective parties thereto. For example, customers and merchants who practice the present invention optionally can be supplied with database-supported information, reports, and analyses.



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**Integrated Commerce Environment (ICE) --  
A Method of Integrating Offline and Online Business**

5    **1. Field of Invention**

The present invention relates generally to a method of enhancing electronic commerce. In particular, the present invention relates to a means of using a computer-based network (1) to add convenience and value to the lives of shoppers, 10 (2) improve the lifetime values of customers that shop in bricks-and-mortar retail stores, and (3) to add value to businesses that conduct sales electronically, including on the Internet.

This application claims priority to Provisional U.S. patent application Serial  
15 No. 60/158,381, filed October 12, 1999, entitled METHOD AND SYSTEM OF  
PROMOTING WEB SITE ADDRESSES TO BUSINESS CUSTOMERS.

2. **Background of the Invention**

The recent explosion in the popularity of the Internet has provided  
20 tremendous potential for marketing goods and services. Although the creators of new  
businesses specifically designed for Internet commerce are able to use features of the  
latest technology to optimize business operations, many existing retail stores still  
operate under certain restrictions and inefficiencies that typify traditional business  
methods. At the same time, Internet-based businesses face unique problems that do  
25 not exist with brick-and-mortar (i.e., traditional) establishments. In other words, each  
category of business -- whether web-based or traditional, has its own respective  
challenges.

The frenetic pace of "modern" living has created a society in which  
convenience is king, and people are willing to pay for it. One needs only consider the  
30 widespread success of ATM machines, convenience stores, and the fast food industry

to see evidence of this fact. A rule of thumb in today's world is that the more attractive and easier something is to buy and use, the more likely it is that the customer will buy and use it often.

Brick-and-mortar retail businesses today are under increasing pressure to 5 perform in a changing economic landscape. In addition to the threat posed by the new cyber competitors, the age old "traditional" problems of pilferage, inventory exposure, and difficulty in maintaining and enlarging the customer base remain. If retail businesses were to develop ways to increase convenience to the customer during the purchase transaction, as well as to solve the above problems, they would 10 enjoy a distinct advantage over businesses operating under current usual business practices.

One of the advantages that online cyber stores have over traditional stores is virtually unlimited shelf space, such that an essentially unlimited range of different products and services can be offered to the prospective customer. Conversely, the 15 limited selection that traditional stores offer is a disadvantage in the new, modern business landscape.

On the other hand, web-based businesses have their own particular obstacles to success. The owners of commercial web sites typically attempt to attract standard personal computer users who access the World Wide Web to visit their sites, 20 preferably to the exclusion of other sites. In fact, attracting viewers to one's web site is one of the biggest challenges recognized by owners and managers of commercial Internet web sites. Once a viewer is brought to a site, there is at least the chance that the viewer will take a positive action (e.g., buy something). A majority of businesses that have built and continue to maintain a commercial web site has reported 25 problems associated with attracting viewers to their site.

Popular methods that have been used to attract viewers to a target site include registering with a number of search engines, placing banner advertisements on other web sites, using hyper links which are connected to other web sites, and using traditional advertising methods (e.g., print, radio, television).

One of the underlying problems for these businesses is that there are now millions of sites on the web, making it difficult for any one site to be noticed by the millions of web surfers that use the Internet daily all over the world. Finding a particular site on the web has been compared to finding a grain of sand on a beach:

- 5      there are just so many grains to choose from that no one grain stands out.

Search engines rely on specific rules regarding key words to find a particular site. A typical user trying to find a site concerning a specific topic might type in a key word related to the topic, and receive back references to hundreds of thousands or even millions of sites that all contained that key word. Even a Boolean combination  
10     of several keywords may still commonly return thousands of site references, thus making it difficult for a business owning a site to attract the attention of viewers as a result of competition from other sites.

Hyper links, which are connected from a merchant's web site to other web sites, can be effective in attracting viewers to the merchant's site -- provided that the  
15     other sites actually have traffic, and that a portion of that traffic clicks on the hyperlink. However, the problem with this method is that, even if the other sites have traffic, many viewers may not choose to click on the hyperlink to the merchant's site because the hyperlink may not seem to be that interesting.

Traditional print advertisements that prominently display a web site address --  
20     whether it appears in a publication or company literature, on business cards, etc., typically persuade only a small percentage of people who see the ad to actually go to the site advertised.

All of the above methods depend more or less on a web surfer being motivated to take action - i.e., to look for something using a search engine, to click  
25     on a hyperlink, or to act on information from an advertisement. The holy grail of cyberspace would be a "high hit rate" method of encouraging viewers to visit a particular site, which then would direct them to other web pages.

A number of contemporary observers of the Internet industry have predicted the emergence of a new kind of business model that, in effect, would be an  
30     information intermediary or "Informediary" between Internet customers and vendors.

An Infomediary would protect the privacy of its clients from intrusive advertisements on the Web while delivering to marketers highly focused and descriptive profiles of potential customers in certain markets. One of the challenges with such a business model will be the high cost of acquiring new clients to participate in the business of  
5 the Infomediary. Typical estimates currently run from \$50 to \$100 to acquire a single client. A method of reducing client acquisition costs would certainly benefit an Infomediary business.

Several books have recently (i.e., early 1999) become available and address new business models based on Internet commerce. Hagel and Singer have written  
10 *Net Worth*, which describes how Infomediaries could function in the future. Godin has written *Permission Marketing*, which describes many of the principles that Infomediaries could employ to create a viable business model, is one of the most insightful books on marketing on the web. Godin notes that advertising is the science of creating and placing media that interrupts the consumer and then gets him or her  
15 to take some action. Television, radio, and print advertisements all are techniques in interrupting the attention of people. Thus, these are examples of Interruption Marketing. The challenges of Interrupt Marketers are:

1. *"Human beings have a finite amount of attention.*  
20 You can't watch everything, remember everything, or do everything. As the amount of noise in your life increases, the percentage of messages that get through inevitably decreases.

2. *Human beings have a finite amount of money.*

25 You also can't buy everything. You have to choose. But because your attention is limited, you'll be able to choose only from those things you notice.

3. *The more products offered, the less money there is to go around.*

It's a zero sum game. Every time you buy a Coke, you don't buy a Pepsi. As the number of companies offering products increases, and as the number of products each company offers multiplies, it's inevitable that there will be more losers than winners.

5

4. *In order to capture more attention and more money, Interruption Marketers must increase spending.*

10 Spending less money than your competitors on advertising in a cluttered environment inevitably leads to decrease sales.

5. *But this increase in marketing exposure costs big money.*

15 Interruption Marketers have no choice but to spend a bigger and bigger portion of their company's budgets on breaking through the clutter.

6. *But, as you've seen, spending more and more money in order to get bigger returns leads to ever more clutter.*

20 7. *Catch-22: The more they spend, the less it works. The less it works, the more they spend.*

Is mass marketing due for a cataclysmic shakeout? Absolutely. A new form of marketing is changing the landscape, and will affect Interruption Marketing as significantly as the automobile affected the makers of buggy whips."

Godin makes the observations:

- 25 a) Mass marketing is changing; interruption marketing is becoming increasingly less effective. "Mass media is dead, long live niche media."
- b) Direct marketing is more effective than advertising, offers a better return on investment, is more measurable.
- c) Permission marketing is better than mass marketing.

30

*"Consumers are now willing to pay handsomely to save time, while marketers are eager to pay bundles to get attention.*

Interruption Marketing is the enemy of anyone trying to save time. By constantly interrupting what we are doing any given moment, the marketer who 5 interrupts us not only tends to fail at selling his product, but wastes our most coveted commodity, time. In the long run, therefore, Interrupt Marketing is doomed as a mass marketing tool. The cost to the consumer is just too high.

The alternative is Permission Marketing, which offers the consumer an opportunity to *volunteer* to be marketed to. By talking only to volunteers, Permission 10 Marketing guarantees that consumers pay more attention to the marketing message. It allows marketers to tell their story calmly and succinctly, without fear of being interrupted by competitors or Interruption Marketers. It serves both consumers and marketers in a symbiotic exchange.”

Other innovations pioneered in the United States and abroad are the practice 15 of point-of-sale, online, and database marketing, as practiced by Catalina Marketing Corp. Catalina has been creative in using UPC-based scanner technology to target consumers and distribute coupons at supermarket checkouts based on current purchase behavior. It has also used messages delivered in store by a standard printer and messages delivered by email. It has been a leader in purchase-based, individually 20 customized communications and promotions.

One of the challenges with point-of-purchase database marketing and permission marketing is that no one has yet combined the two in a truly effective and efficient combination.

A number of inventors have addressed individual or mini-components of the 25 problems described above, but none has developed an overall methodology to help retail businesses to enhance their attractiveness to consumers by increasing permission levels that would allow more marketing influence in obtaining a greater “wallet share” of consumer spending. Typically, prior inventors have totally avoided addressing the challenge of attracting more brick-and-mortar shoppers to an Internet 30 portal.

Two examples are provided by United States Patent Nos. 5,806,043 and 5,774,869 to Toader. Both of these inventions provide on-line help services to customers, but neither helps the retail business establish a presence on the web.

In addition, several U.S. companies use or sell electronic standard credit-card-type terminals to offer off-premises inventory to retail customers in stores, including such companies as LDC, Nexstar Communications, and Rite Aid. Apparently, these companies do not use systems with barcode facilitation of product replenishment. Furthermore, these systems do not promote retail customers going on the web in order to enhance brick-and-mortar (i.e., traditional) store inventory offering and revenue generating. Finally, none offer dynamic account reporting on demand via standard fax to store managers.

Therefore, it would be advantageous to provide a computer-based system that enhances Internet commerce by supplying a commercial web site ("Web Store") with hyperlinks to portal web sites, where the hyperlinks contain promotional messages to generate curiosity and interest on the part of the web site visitor. Furthermore, it would be advantageous to provide such a computer-based system that also acts as an intermediary between customers, retail merchants, wholesalers, Fulfillment Houses, wholesale vendors, and at least one Internet portal company.

[Note: In this document, the term "Fulfillment House" refers to a business that can receive an order with payment for a commodity and deliver the commodity to the end consumer. One example includes a cellular telephone airtime service company that receives an order from a customer to buy airtime. The company "delivers" airtime by crediting the account of the customer so that the customer can make a cellular telephone call.]

A second example of a Fulfillment House is a gift store that receives an order for a crystal vase. The store packs the vase and ships it via Federal Express to the customer's home.

A third example of a Fulfillment House is a software vendor that receives an order for a particular computer program. The vendor delivers the program

electronically to the customer's standard personal computer by downloading it via the Internet.]

One of the biggest challenges in the Internet economy is in attracting first-time visitors to web sites. In early 2000, it has been reported that some high-profile 5 online business are spending ten times the dollar amount on advertising as comparable offline businesses in order to attract new customers to web sites for the first time. Unfortunately, many of these high-priced investments for advertising made by Internet start-ups have not resulted in the response from the marketplace that was desired.

10 A key observation in contemporary society is that time is precious to most people. Many people feel that there is not enough of it. One of the major trends today in the U.S. is the proliferation of large retail stores. A frequent problem that shoppers face is in wasting time looking for something in the retail store. Another time wasting activity is standing for minutes in long checkout lines. In a typical 15 grocery store, for example, a customer that visits the store every week for a year is likely to spend over four hours in boredom standing in line at the checkout.

Business-to-business ecommerce is a competitive field. There are several challenges today in building electronic marketplaces. The primary cost to building an electronic marketplace is in acquiring buyers and sellers. It is difficult to attract 20 buyers without sellers and sellers without buyers (the chicken and egg dilemma). Substantial up-front spending is necessary for brand-building and customer acquisition. A method of getting buyers and sellers cheaply would be an advantage.

Business-to-business (B2B) commerce will eclipse business-to-consumer (B2C) on the Internet. Included in industry predictions are:

- 25 • Forrester Research predicted in Jan., 2000, that business-to-business ecommerce would reach \$1.3 *trillion* by 2003.
- A large slice of business-to-business ecommerce will be in the supply chains (e.g., manufacturers, wholesalers, distributors) that service retail stores.

With the advent of the Internet, businesses are searching for ways to use new technology to improve their bottom line. In general, there are four potential attractions of any business or organization:

1. Transactions -- the overt motive of any business. Companies are in business  
5 to transact with customers.
2. Community -- Relationships add value to organizations. Service organizations like the Rotary Club exist in large part due to the attraction of people networking with each other. Cisco Systems has added substantial value to its business due to its community of users that help each other solve technical problems related to Cisco  
10 equipment.
3. Information -- a component of any product that adds to its value. The better the information about a physical product or a service, the more the customer will tend to value it. This is often what a successful brand does in communicating its unique selling proposition.
- 15 4. Fantasy -- People enjoy escaping from their daily routines. The film, television, and game arcade industries are all based upon this fact.

Traditional retail stores offer commercial transactions as the primary attraction. The Internet allows new permutations of commercial exchanges (e.g., reverse markets) due to the efficiency of new technology.

- 20 In the book *Net Gain*, Hagel and Armstrong argue that virtual communities online will be one of the drivers of the new economy. People that congregate online due to a common interest often have an affinity toward certain products or services. For example, canoeing hobbyists would probably be interested in outdoor equipment. A virtual community of such hobbyists that participate in an email discussion group would be excellent targets for advertisements from a canoe  
25 manufacturer or from white water tour operators.

- The right information about a product or service adds value to a business. A common commodity often gains value in the eyes of a consumer when special knowledge about the commodity is revealed. For example, a football used to win a  
30 Super Bowl championship is worth more than an ordinary football.

A new trend in retailing is to offer entertainment in retail stores as a means of keeping customers loyal and to increase word-of-mouth advertising. Chucky Cheese restaurants have attracted millions of youngsters due to the entertaining atmosphere, complete with robots, found in hundreds of restaurants.

5        Retail chains in recent years have begun to focus on increasing lifetime value of their customers. New businesses such as Infomediaries can benefit from economical methods in gaining customers.

Virtual communities have been one of the most significant trends that has arisen out of the Internet revolution. The forum for such meetings has typically been  
10 computer bulletin boards, discussion groups, or chat groups, where participants may go online to talk about anything from cars to children, personal to professional issues, politics or anything else under the sun. The historical beginnings of online or virtual communities for the masses had its beginnings in the early >90s on proprietary services such as in America Online chat rooms. In recent years, there has been a  
15 growing recognition that virtual communities can also be used by businesses (e.g., eBay, Cisco Systems) as an integral part of their business model. For many commercial sites, communities creates “stickiness”, i.e., they make customers want to return because of established online relationships or because of rewards points accumulated in games and contests.

20       Hagel and Armstrong argue that communities will play a major role in the Internet economy. Many business web sites (e.g., eBay, Cisco Systems) now include a community as an integral component in their business model. Some virtual communities have been sold based on amount of traffic that they direct to commercial sites and on the demographics of the community members. One price  
25 model of a typical virtual community’s economic valuation is roughly equal to \$1 per page view per month, measuring how much community members are redirected to commercial web sites.

Recent history (i.e., 1995 to 1999) has shown that the characteristic growth pattern of virtual communities is typically one of “network externalities” that starts  
30 slowly and gradually increases until a critical mass of factors is reached. At this point,

- hyper growth takes over. Four business models that followed a similar increasing returns pattern in early stages of development are those of Microsoft, FedEx, Internet hosts, and fax machines. For example, when there were only 100 fax machines in North America, most business people who heard about them did not
- 5 feel particularly motivated to get one because (aside from the high cost of a fax machine back then) there were so few machines they could send to and receive from. However, as the number of machines gradually increased to a critical mass, awareness also increased that faxes are very useful and growth of the market became exponential.
- 10 The business of virtual communities is also one of increasing returns. Failing to get involved will mean falling behind those who do. It will be cheap to get in early, expensive later. Static spreadsheets will see the tip and miss the iceberg. The four factors that will make communities grow are transaction offerings, content attractiveness, member loyalty, and member profiles. Transactions will become
- 15 increasingly attractive to the customer and profitable to Infomediaries as privacy and profile standards are refined and accepted by consumers and by businesses.

Member loyalty in a virtual community is a function of member emotional attachments related to what the community is about. For example, a community related to pets might engender greater loyalty than a community related to home improvement supplies because people have a greater emotional attachment to their animals than they do to aluminum siding. A community can be very profitable after it gets going. Communities can, after buildup to critical mass, also achieve exponential growth that can reach 20% per month when they are well managed.

The biggest value in virtual communities is in member-generated content.

25 Community members develop relationships between themselves and want answers from each other on topical issues. The good news is that the community organizer does not have to spend money on content development, since the main value to members is the interaction among themselves.

Communities bridge the gap between online and offline. Traditional

30 intermediaries (i.e. retail store chains) should be the first to adopt virtual

communities. The message to retail chains should be: If you don't convert your customers to virtual communities, someone else will do it for you.

One of the rules of online communities is that markets should be defined around customers, not vice versa. This means that if retailers pay attention to the 5 communities their customers are in, the retailers will get invaluable market feedback. The challenge for companies is that customers can complain to each other about a company in a virtual community. The company that responds proactively to customer feedback (above all, negative feedback) will win and keep customer loyalty. The retail chain that ignores feedback will lose customer loyalty.

10 Successful community organizers will be able to ask for and obtain community member profiles while maintaining strict privacy guidelines. Profiles of consumers will have economic value to marketers and will be useful for automatic matching between what a business is selling and what certain consumers want. Community organizers will understand that it is in their own best interest to maintain 15 the anonymity of individual community members while acting as the middle man between vendors and consumers, matching the two based on the profiles of each. In fact, so-called reverse markets that use these principles of protecting community members' privacy have already begun to spring up (e.g., Priceline.com). These reverse markets are defined where a consumer can ask for product information and 20 the community organizer will distribute the query to the proper vendors. Reverse markets as an accepted business model are gaining momentum in virtual communities in the early Internet economy.

Current conventional thinking in 2000 is that online communities are a means to dominate online commerce. Because industry pundits (e.g., Hagel and Armstrong) 25 predict that the top two community organizers in each online industry will dominate each market sector, speed to market is critical. Traditional blueprints requiring infrastructure investment and slow buildup of customer base no longer apply. Instead the challenge is to move quickly from a community with no members to a community with a critical mass of members.

What is needed is a method to fortify and enhance the attractiveness of the destination commercial web sites. Web sites that conform to the profile of the customer are more attractive than generic sites.

There are some challenges in building online communities.

- 5      1. Most companies will need to do a complete rethink of what business they're in.
2. Member acquisition is expensive, just as it is very expensive for a commercial web site to acquire new customers. The rule of the market of virtual communities is that generators of new members can charge a hefty bonus to those that use the new members.
- 10     3. Selection of an appropriate community focus is important regarding core communities vs. niche communities. Some topics or demographics evoke more passion than others.
- 15     4. Who will own the customer? The virtual community organizer that champions the customer. One of the things that customers want is choice. E.g., the AOL/Time-Warner merger provoked a lot of questions during the early March of 2000 congressional hearing regarding whether the new company will allow competing content (i.e., non-Time-Warner) on AOL. CEO Steve Case's remark was that if consumers don't have a choice they can easily click on a site that does give them the choice. In general, marketers stand to gain from virtual communities if they leverage new customer power rather than fight it. Ownership/management rights to the usage and transaction profiles accumulated by the affiliated communities have to be negotiated. The current privacy debate will have to be considered in deciding
- 20     5. policy.

One of the innovations in retail chain marketing in the 1990s is the use of electronic networks to sell products and offer promotions (e.g., rebates and coupons) to in-store customers. POSA systems have become common in selling "soft" products such as long distance calling, cell phone airtime, and other telephone based services.

Catalina Marketing Corp. has been successful in using the Catalina Marketing Network (CMN), which among other things, attracts customers to a store through coupon and rebate promotions.

One of the functions of the CMN is that when customers in a retail store use  
5 a loyalty card, each customer is identified at the checkout, along with the products purchased, by means of barcode scanning of the loyalty card and each purchased product. The CMN keeps a purchase profile on each customer for about a 52 week period. Using sophisticated modeling techniques, the CMN can print out coupons during the checkout that are designed to influence shopper purchase behavior to buy  
10 certain products and to return to the store to redeem coupons. These coupons make rebate offers to customers that are based upon the actual purchase behavior of individual customers. Catalina has been a pioneer in using new technology to market electronically to the customer in the retail store. Yet, new technological capabilities and new consumer trends point the way toward even more innovations that retail  
15 chains use to improve lifetime value of their customers.

Several trends are notable in United States in early 2000:

- Chain retail stores were initially slow to adopt the Internet but are finally moving quickly to build online businesses. Most companies, however, lack a coherent strategy for exploiting the new methods and technologies available  
20 in ecommerce. Among the biggest problems involve first attracting customers and then keeping them coming back.
- Experience by some of the most successful online businesses indicate that a combination of online and offline (i.e., traditional bricks and mortar) business provides a synergy that is the most effective strategy in achieving good growth  
25 potential. In the holiday shopping season of 1999, the web sites with the fastest sales growth were owned by businesses with offline brand names (e.g., Toysrus.com with 356% growth).

### **3. Summary of the Invention**

ICE is a system that integrates online and offline commerce. There are two components that work together synergistically to create maximum integration: the  
5 Portal User Magnet Process (PUMP), and the Shopping Cart Computer (SCC).

PUMP (Portal User Magnet Process) essentially provides a marketing network that offers benefits to its users. It comprises a computer-based system that functions as an intermediary among the various stakeholders in PUMP, such as customers, retail merchants, wholesalers, Fulfillment Houses, vendors, and one or more Internet  
10 portal companies. Furthermore, customers and merchants and other users have access to database-derived information, including a variety of reports and analyses. For these reasons, PUMP also improves the businesses of the commercial stakeholders.

PUMP was chosen as an acronym because the invention serves as a virtual  
15 traffic pump to business web sites. It comprises a new method for driving web site viewers to a designated web site (the Web Store). Combining the principles of database and permission marketing, it uses customized point-of-sale printouts. By means of dynamic databases containing product, store, and customer profiles, a retail  
20 checkout-counter standard printer can provide a printed promotional message to a customer in real time at checkout. The promotional message is the first step of a communications suite designed to hook the customer into visiting the Web Store site to take advantage of the offer of the promotion.

Once the customer is at the Web Store, one or more offers which are  
25 designed to begin a dialogue with the customer are made available on a web site screen. The first time the customer visits the Web Store and at least once and/or substantially every time thereafter, he is offered something, whether it is, for example, a free infomercial tape, an email news service, or a product or service for sale. The customer that accepts the offer is giving the marketer permission to send him something of interest. In order to receive anything, the customer must provide  
30 personal data (e.g., name, home address, or email address) to the marketer. If the

customer repeatedly returns to the Web Store over time, a dialogue ensues where the marketer can make offers of products, services, or information and the consumer can increasingly grant more permission to be sent each new, approved item. In the process, the marketer can gradually add information to the customer profile in a 5 database that will help target the customer with offers that are relevant to his needs, wants, or interests.

The elements of permission marketing that PUMP offers to consumers are:

1. Hook the customer with an offer. To receive the offer the customer must give the marketer permission to send him the offer. To do so, the marketer must get 10 personal information from the customer.
2. Set up some form of communication (e.g., email) that can make one or more additional offers to the customer. If the marketer has read the customer correctly, the newest offers will be attractive to the customer. If so, it may be the beginning of a relationship.
- 15 3. Interact with the customer repeatedly. This frequency of exposure opens the door to making the customer aware of an expanded selection that the marketer offers. The more frequently the customer visits the marketer's web site for one specific purpose, but happens to see other options, the more aware he will be that these options exist.
- 20 4. Make the customer aware of options. The awareness of the expanded selection can lead to familiarity with the options.
5. Make the customer familiar with the options. Familiarity results when a customer checks out new offers related to the options. Familiarity breeds trust.
6. Promote trust by repeatedly cycling through the above steps. Trust leads to 25 the customer buying something new from the expanded offering the marketer makes.

Three requirements for permission marketing to work are:

- a) It must be anticipated. People look forward to hearing from the marketer.
- b) It must be personal. The messages are directly related to the individual.
- c) It must be relevant. The marketing is about something the prospect is 30 interested in.

PUMP moves towards these three goals by:

1. After the customer is induced to visit the Web Store the first time, PUMP will offer something to the customer. If the customer agrees, PUMP arranges for the delivery of the item. In this way, the item is anticipated.
- 5 2. Using customer profiles, PUMP can be personal by communicating to the customer in a way that lets the customer know that PUMP knows who he is.
3. Product and customer profiles are used to trigger rules-based promotional messages to be printed out at point of sale and to appear on PUMP web site screens. This provides relevancy.
- 10

PUMP was conceived to aid retail businesses operating in several different archetypal models. These models are called the Core Business Systems (CBSs). Each CBS benefits in overlapping but different ways from the expanded functionality offered by PUMP. Several examples of CBSs may be cited for illustration:

1. Catalina Marketing Corp. model -- PUMP adds to the profit potential of companies like Catalina Marketing by adding customer permission to the asset base of the marketer. In this way, in-store incentive programs to bring customers back to the store have even more power to influence consumer behavior. Two of Catalina's programs which PUMP augments are:
  - A. promotions of certain products using incentives, and
  - B. database marketing, using Universal Product Code (UPC) scanning and Point-Of-Sale (POS) printouts.
- 20 2. Nexstar Communications Inc. model - PUMP expands the existing business of in-store electronic sale of virtual inventory of companies like Nexstar by adding an infrastructure which can extract a larger share of the customer's wallet. In Nexstar's existing business model, a customer in a retail business can buy a range of products or services that are not physically in stock in the store. This is accomplished by using a standard electronic standard credit-card-type terminal or by giving to the customer a toll-free telephone number
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- 30

to place the order, which is then delivered to the customer.

3. Toys "R" Us model - PUMP helps a large chain like Toys "R" Us that has been left behind by startup companies (e.g., eToys) in Internet commerce. Many such large chains have now decided that they must catch up or risk extinction. PUMP provides the mechanism to generate traffic quickly and efficiently to web sites that can be promoted at the point of sale in a retail store.
- 5
4. Small, independently-owned retail store model - PUMP allows a small retail business to compete with larger chains by profitably selling specialized product selections and providing information to customers on the Internet with little or no expense to the retailer.
- 10

Added to any of these CBSs, PUMP provides the platform for a business to develop in a series of planned stages designed to start on a relatively modest scale and grow to a large online organization. Three such stages that may be used in a 15 PUMP lifecycle are:

- a. P1 - stands for the 1st level implementation of PUMP and adds value to the CBS by providing an infrastructure and a set of procedures that acquire increasing permission from customers that first walk into a retail establishment, and then later visit the Web Store site by using a standard 20 personal computer.
- b. PX - stands for PUMP eXtension, and becomes implemented when PUMP is applied to multiple industries. When this happens, the number of customers is increased. The opportunity for building broader customer profiles is also increased.
- 25 c. PM - stands for PUMP infoMediary, which is an information intermediary business that acts as an efficient middleman between buyers and sellers of products and services.

Each of these models provides the flow of customers in retail businesses that 30 have the potential to be diverted to the Web Store.

The single most important thing that will drive the success of PUMP in the marketplace is the hook, which initially attracts the customer, i.e., the point of sale receipts or printouts that offer a promotion on the Web Store. The effectiveness of the hook depends on how well the printed promotions target consumers. One of the 5 purposes of using databases in PUMP is to gather and maintain customer profile information that can be used to identify and address customer interests, wants, and needs. In this way, rules-based database management using customer profiles can lead to customized promotional printouts at the point of sale. With customized promotions based on accumulated buying behavioral data on the customer, the 10 message on the receipt is more likely to attract the customer to visit the Web Store.

For example, suppose a consumer that has a newborn baby shops in a particular grocery store that is a PUMP user. Whenever purchases are made in the store, store clerks scan the UPC codes on the products as well as the bar codes on customer identification cards and on discount coupons. If the customer has a 15 discount card and has been shopping in the store for at least a few weeks, PUMP will know who she is from the information provided at the time of registration of the card. Furthermore, PUMP will know what products the customer has been buying, how often, and in what sizes. Additionally, PUMP will notice that a new buying pattern has emerged - the customer has started buying baby food and diapers. 20 Therefore, a rule in a PUMP database, for example, includes: If a customer buys products that indicate children in the household, print a certain class of promotions on sales receipts. Such a promotion, for example, is: "WIN a chance for a four-year COLLEGE EDUCATION for your child! Visit [www.ourWebStore.com/kids](http://www.ourWebStore.com/kids)."

The effectiveness of PUMP's use of permission marketing hinges on two 25 variables: the skillful use of the hook, and the proper design of the rules that generate the communications that engage the customer in a dialogue.

The promotion on the point-of-sale printout will vary in effectiveness in persuading the customer to visit the Web Store due in part to the quality of the customer profile, which can range from non-existent when there is no information on

the customer to very good when at the checkout counter of a store a customer is identified for which there is a history which has been built over time.

- Several types of hooks on printouts are designed to get a customer to visit the Web Store. Each type should have several versions, which are randomly printed, and
- 5 which can be tracked to determine which is most effective for a given product market, region of the country, etc. Some examples follow below.
- A. A customer-specific printout triggered by a customer identification card (e.g., check cashing, discount, or smart), combined with an existing customer profile in the database, produces the most focused promotions of all. An example includes
- 10 customer-specific life event-triggers, such as a new baby in the family being born, or a graduation or marriage by a family member.
- B. A product UPC-triggered promotion generates a printout based only on profiles of products being purchased. When products are scanned at a checkout counter, the link with a database where product profiles are stored triggers rules for
- 15 generating promotions for particular trigger products. Examples include:
- a. Baby or children products trigger: "To win a chance for a free college education for your child at [www.ourWebStore.com/kids](http://www.ourWebStore.com/kids).
  - b. Alcoholic beverages trigger: party contests - "Win free party drinks every weekend for a year! Go to [www.ourWebStore.com/party](http://www.ourWebStore.com/party)".
  - c. Pet products trigger: - "Get tips on your pet! Go to [www.ourWebStore.com/pets](http://www.ourWebStore.com/pets)"
- C. A holiday-triggered printout comprises holiday-specific promotions generated by rules based on which holiday is approaching. -- "Great Gift Ideas for Every Member of the Family! Go to [www.ourWebStore.com](http://www.ourWebStore.com)."
- 20 D. A special event-triggered printout is associated with any event, either personal, local, national, or global, which justifies a promotion. Examples include:
- a. Sporting event (e.g., Auburn/Alabama Football game) trigger - "Choose the MVP of the game and win a free football jersey of your school," or

- b. Seasonal (winter, spring, summer, fall) promos: clothing needs relating to vacations, sports seasons beginning/ending, school starting/ending, etc. trigger appropriate promotions.
- E. Generic promotions are based on store type (e.g., convenience store, pet store,  
5 etc.)

The next step is to design permission suites for Web Store visitors. For example, once a customer visits a Web Store promotions-related page, she is led to a dialogue which at least once and/or substantially always offers the opportunity for her to gain something in return for her personal information. For instance, she sees  
10 something like the following types of dialogue:

- 1. "Thank you for visiting our sweepstakes page. Please click on the sweepstakes below that interests you." Examples include:
  - A. "Free 'College Education", or
  - B. Free beer every weekend for a year.
- 15 2. "Thank you for visiting our tips page. Please click on the subject below that interests you." Each subject would offer something to the customer in return for personal information. Examples of subjects include:
  - A. Pet health, nutrition, grooming: "For a free email newsletter by Dr. Expert on cats, subscribe here," or
  - 20 B. Personal appearance, fitness: email newsletter, free perquisite
- 3. "Give your loved one the best holiday surprise ever! Click here for gift ideas."
- 4. Sporting events: "Choose the exact score of your game and win big!", "Get your tee shirt with the score on it!", "Get your tee shirt with your choice of photo on the front."
- 25 5. Seasonal themes: "Win a genuine leather jacket in time for Thanksgiving." "Save on resorts in Aspen." "Get a discount on season's Braves tickets." "Get 10% off of school clothes."
- 6. Life events: "Baby clothes 40% off", "Wondering what to give that graduate?", etc.

As a dialog progresses with a customer over time, one often-beneficial rule to follow is to change the communication as more is learned about the customer. In summary, PUMP performs a number of different functions. It hooks consumers by offering something (e.g., prizes, information, etc.). To receive it, the consumer must 5 register by entering personal information (e.g., name, address, etc.). In this way, the first step in acquiring permission to market to the consumer is obtained.

The Web Store also offers a means of selling products and services, and offers information of interest to consumers. The merchant can receive a sales commission from this service.

10 If the Web Store visitor becomes a customer, he or she will receive a personal account page on the customer Extranet, which is accessible using a password. Thereafter, the customer may check account information, including delivery schedules, service consumed, incentive points accumulated, and so on. The personal account page will become increasingly personalized as the customer indicates more 15 and more preferences over time.

Retail merchants benefit because PUMP is easy to work with. In addition, a Sales And Marketing Information System (SAMIS) provides online promotion and sales of PUMP service to business people in a way that is easier and less stressful than dealing with a sales person. In addition, a human service representative is only a 20 phone call away.

In one or more of the CBS examples presented above, a preferred embodiment of the PUMP includes a retail store set up with a standard credit-card-type of terminal with UPC scanning capability, connected to a standard printer capable of printing the required promotions. Variables in any setup are whether or 25 not a store chooses to make in-store sales of virtual inventory, keyed into the standard credit card terminal (i.e., the Nexstar model), and what product, service, and window configuration on the Web Store to use.

PUMP is beneficial to retail merchants because it increases the worth of a customer to a retail business in three ways. First, it increases the wallet share of the 30 customer. This means that, through PUMP, the customer is attracted to buy online

more products and services than he would in the referring retail business alone. Second, the consumer remains a customer longer because now there is more to keep him coming back. Instead of just the physical inventory in the retail store to attract the customer, there is now a wide range of products and services that PUMP 5 increasingly offers to the customer. As the customer's database profile becomes enriched over time with more and more details regarding that person's tastes and preferences, the offers become better focused on meeting the needs of that customer. And third, the bricks and mortar business can be promoted on the Web Store with promotions to bring the customer back in the door.

10 PUMP will benefit Fulfillment Houses because after the initial investment of time and energy necessary to populate the PUMP Fulfillment House Database with product specifications and information, there is the capability of providing large numbers of customers. This happens because the PUMP process is efficient in attracting Web Store viewers. As PUMP progresses through the stages of growth 15 from P1, to PX, to PM, the numbers of Web Store customers grows quickly. Furthermore, there is a cross network effect in the customer base that is evidenced, for example, when a customer of a pet store visits the Web Store of the pet retail business. There he discovers that a sporting goods store in his town also uses PUMP. The customer may eventually buy products from the sporting goods' Web Store, thus 20 benefiting the sport goods Fulfillment House that serves that industry. When the Web Store pages are smartly designed and configured, Fulfillment Houses soon begin to rely on PUMP for much of their business.

Wholesalers also benefit from enrollment in PUMP service at the SAMIS web site, where they readily appreciate the ease of use and the services provided. Among 25 the benefits they see on SAMIS are simulations of how a business like itself (e.g., an oil jobber), with characteristic parameters that can be input into SAMIS, will profit by using PUMP.

Vendors are delighted from the benefit of primary research data, information and intelligence on their key markets that are accessible through PUMP. 30 Furthermore, by using consumer profile standards, the PUMP operator is able to

identify and deliver pre-qualified customers that have a high likelihood of purchasing the vendor's product. This reduces and often almost eliminates the vendor's sales expense, especially if the vendor makes use of PUMP as a sales medium.

Finally, PUMP provides an efficient Infomediary business tool that operates between manufacturers, wholesalers, retailers, and end consumers because, by using appropriate profile standards that efficiently communicate preferences from potential customer to potential seller, marketers have a higher chance of selling products and services at a lower cost.

Because PUMP comprises a traffic magnet with a permission acquisition process, it will build a large customer base with deep permission. This will attract massive attention from the retail, wholesale, and manufacturing industries.

Accordingly, many objects and advantages of the present invention result from use of the present invention.

The Integrated Commerce Environment (ICE) is another embodiment of the invention. ICE creates an even better incentive for customers to act on in-store promotions by supplementing the promotions found on printed receipts with promotions from an additional channel.

ICE comprises a method to build profiles of retail store customers. Such profile information will provide the web sites of retail stores the flexibility to customize ICE for individual customers. In doing so, the online businesses of the stores will become more attractive to consumers.

ICE comprises a system that adds a number of new promotional techniques to traditional methods of attracting customers to web sites. It provides a new shopping and entertainment tool, the Shopping Cart Computer (SCC), which is a small computer with a graphic display, mounted on the back of a shopping cart in a way that allows the shopper to benefit from shopping and entertainment programs during a shopping session in a retail store. It attracts the customers of retail chains to revisit the stores and to use the SCC in the stores. The SCC uses a wireless connection to connect to promoted web sites on the World Wide Web. On the SCC, shoppers will benefit from a Shopping Program, which will save them time and money while

shopping in the store, as well as from an entertainment program, called the bonding program or the Bonding Site. The Bonding Site is an entertainment-providing web site available on the SCC. It offers benefits such as commercial transactions, targeted online community memberships, relevant information related to the consumers interest, and entertainment options involving fantasy. In the process of providing customers with the value and benefits from the SCC, the retail stores will improve customer lifetime values. An additional benefit will be to build traffic to retail store web sites.

ICE also helps build new types of businesses that have sprung up in the Internet era, such as virtual communities and Infomediaries. In an exemplary embodiment, ICE builds online communities that meet identified needs of defined segments of retail chain customer bases. These communities can be owned and managed by the ICE operator, herein called ICEOP, or by third parties. An incentive given to retail stores can be to allow free or bargain price advertising in a core number of virtual communities.

And finally, ICE is the springboard that allows the efficient and profitable construction and building of business-to-business electronic marketplaces. It provides Business-To-Business (B2B) ecommerce markets with the retail stores that serve at the bottom of supply chains as buyers to become a magnet attracting sellers (i.e., the suppliers) into the electronic market.

A typical scenario using ICE begins, in an exemplary embodiment, when a customer goes shopping in her usual grocery store.

1. When she walks in the store, she notices that the store has an unusual-looking shopping cart. Mounted on the back of the cart is a flat panel. A sign over the area where shopping carts are kept explains that the panels are in fact portable computers. A diagram shows how a flat screen can be retracted from a protective case in order for a shopper to see a display while standing behind the shopping cart.
2. When the customer selects a shopping cart, she pulls up the display screen on her cart. Immediately she notices a welcoming display with several promotional messages that appears on the screen: *Enjoy speed shopping from now on! A simple touch on the screen will tell you where to find products in the store! Get free tips on wonderful recipes that will help you make purchase decisions! Earn valuable points that will save you money on your next trip to the store!*

3. The Shopping Cart Computer (SCC) optionally runs a short introductory program when the shopping cart is retracted from the recharging/docking station. When the program is displayed in a video clip on the screen, the customer realizes how easy the system is to use.
- 5 4. By touching the menu options on the display screen, the customer quickly understands how the store aisles are represented by means of the graphics program which lays out the store. By touching other options buttons which appear on the screen, she easily explores the beneficial functions that are available through the SCC.
- 10 5. The Shopping Program permits the customer to access product category.
6. She selects the products that she wants to purchase and removes them from the shelves, and proceeds to the store checkout. The SCC presents the customer with several programmed options which make up the core functions of the Bonding Site: Commercial Transactions, Community, Information, and Fantasy. She selects fantasy, and for several minutes plays a game with several other shoppers who are all using the SCCs to play the same game in competition with each other while waiting in the checkout line. It is even possible to send other shoppers email messages by addressing the messages to individual shopping carts, which are tagged with easily visible unique numbers. Throughout the entire shopping session, the SCC programs make a number of offers to the customer, who can respond in the affirmative if she is interested in one or more of the offers. If she chooses, she can send an email message to her personal email account to reminder her of the offers she has accepted, with directions on how to take advantage of them.
- 15 20 25 7. When she gets to the checkout, she presents a loyalty card to the clerk, which allows her to get certain discounts. The clerk scans the card as well as all of the products purchased. The SCC identifies which checkout station the customer has selected by means of a wireless position sensor. The SCC loads the customer's click stream data into the customer's profile record which is kept in an ICE database. The SCC enters a closing program which:
  - Shows on the SCC screen the results of the game the customer has been playing while waiting in line,
  - Advises the customer to keep the receipt in order to:
    - Investigate various promoted web sites that are accessible from a personal computer (e.g., www.bondingsite.com), that are promoted on the receipt,
    - Open a customer extranet personal account and keep a record of the purchase that she is making, using the purchase number printed on the receipt for identification,
- 30
- 35

- Enjoy the Speed Shopping Program on the next visit to the store, and to be able to load into a personal extranet\_account the record of her purchase using the receipt purchase identification number, and
- 5           ➤ Begin a game played on the Bonding Site at a point on the next store visit where the customer left off on the previous visit. The customer can scan the barcode printed on the receipt into the SCC on the next store visit as a means to connect game sessions together.
- 10          • Reminds the customer to be on the lookout for the promotional email in her personal email mailbox, if she sent one to herself.
8. ICE prints out a receipt for the customer. On one side of the receipt is a itemized list of the products purchased. On another part of the receipt is a barcode promotion to visit a Web site.
- 15
- At home, the customer gets on her personal computer.
9. Then, because of the entertaining and useful experience in the store of using the SCC and of receiving the promotional email that was sent from the SCC in the store to her personal email account, the customer decides to investigate
- 20          the Speed Shopping Program that was advertised on the SCC screen and in the promotional email.
10. The Bonding Site is promoted on the receipt she brought home with her as well as in the promotional reminder email that she sent to herself. She goes to the Bonding Site URL by clicking on the hyperlink in the promotional email.
- 25          There she learns that the bricks-and-mortar retail store has an online catalog of its products. She opens a private account on a password-protected customer extranet. To her\_delight, she is able to automatically load and edit the specifications of the products purchased at her last visit to the store into her account for easy management of her shopping list that can be used on her

next visit to the store. She learns that she can choose any items from the store's catalog to be added to her next shopping list.

11. Before her next visit to the store, she prints out a list of items that she wants to purchase on her next visit to the store. Each item on the list is numbered.  
5 On a second sheet of the printout is a diagram of the store's layout. Shopping list item numbers appear in the layout on the aisle where the item is found. The customer goes to the store for her next shopping trip.
12. Upon selecting a shopping cart, she scans into the SCC the barcode on her shopping list printout. The barcode gives the SCC the identification of her private extranet account which automatically opens her account. For additional security, a fingerprint scanning sensor, or some other biometric means (e.g., retina scan, voice print) built into the SCC positively identifies the customer, after the customer initializes the identification system. On subsequent visits she can open her account by presenting the means (e.g., left index fingerprint) to the biometric sensor which is attached to the SCC. She can also access her account by inputting a password. Immediately she sees her shopping list appear on the display. A second screen display shows the store's layout, with blinking numbers indicating the store aisles where her selected products will be found. By following directions, the customer quickly and efficiently picks up all of the items on her shopping list, with no lost time searching for products.  
15  
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13. In the checkout line, the SCC offers the customer again a choice of programming. This time the customer chooses to learn about the ingredients of the products she is purchasing. She pulls up the product information from the store's catalog. She spends a minute considering the fat content of the mayonnaise in her shopping cart. She then reads a promotion that appears on the screen for a competing brand of ice cream from the brand that she has selected. She agrees to accept the promotion by pressing a button on the screen that will give her a 20 percent rebate upon purchase of the competing  
25

product on her next visit to the store. The screen tells her of the terms and conditions regarding the rebate.

14. Again when she gets to the checkout, she goes through a similar procedure as before during checkout. She notices that the closing program offers are even  
5 more targeted to her interests than they were on her first visit to the store, due to the fact that her profile is more developed since her first visit to the store and consequently can indicate more precisely what promotions will appeal to her.
15. ICE prints out a receipt similar to the one the customer received on her  
10 previous visit to the store. The printer also prints out a coupon entitling her to the rebate that she has earned.

Over the course of several uses of the Bonding Site or other ICE programs, which she accesses either in-store from the SCC or at home from her standard  
15 personal computer, ICE begins to collect a significant history of click stream data from the customer. This allows increased accuracy in targeting the demographic and lifestyle segment that fits the customer's description. This, in turn, allows ICE to print receipt promotions and/or send email promotions that hit the hot button  
20 interests of the customer. These promotions direct the customer to web sites that meet her needs.

On subsequent visits to the Bonding Site, the customer learns how to scan the barcode printed on a receipt from the bricks-and-mortar retail store into a digital camera attached to her personal computer. This allows her Bonding Site visits to be more relevant, since any one of several means of identification used during a  
25 shopping session in a store (e.g., loyalty card, barcode, etc.) or during a Bonding Site session from a PC (e.g., name, email address, cookie) is a means of using the profile information collected during that session to augment and update the profile of the customer.

The customer goes to the Bonding Site. A version of the Web Store is used  
30 under the transaction section available through the Bonding Site, is sponsored by the

retail store, and is promoted through advertisements and links from the Bonding Site. The Web Store is a benefit that appears on the Bonding Site home page and is a customizable configuration of features available to retail clients of ICEOP. The client can see the customizable information related to the sponsoring retail store (e.g., from 5 the store catalog) within a subsection of the Web Store, the Merchant Window. The customer can also see promotions within other subsections of the Web Store, the Infomediary Window and the Portal Window.

The first time a customer uses ICE, the customer's profile record, which is kept in a back-end database within ICE, is empty or has yet to be created. The 10 customer may choose to identify herself by using some form of personal or anonymous identification (e.g., customer card, biometric parameter such as a fingerprint, etc.).

As the customer uses the SCC on subsequent visits to the store, identifying herself during each session, she builds up a clickstream record of the choices, 15 decisions, and preferences that she has indicated while using the SCC during a session of shopping in the retail store.

ICE builds a permission base with customers by giving each customer customized messages that appear on the screen of the SCC on every store visit, based on a store-specific, product-specific, or customer-specific profile. If on each visit to 20 the store or on each session using the Bonding Site from a personal computer, the customer identifies herself by some means (e.g., biometric, ID number, barcode), ICE is able to both improve the customer profile on subsequent sessions, and also better able to target promotions to individual customers.

When the customer uses a loyalty card, a shopping list barcode, or a receipt 25 barcode, or some other means of ID over a number of store visits, ICE will additionally build a customer profile based on purchase behavior. In addition, the profile can be enhanced when the customer visits the Bonding Site and identifies herself using one of the approved methods of identification. The message displayed on the SCC screen or printed out at the point-of-sale may invite the customer to learn 30 more about a topic of interest related to her profile (e.g., pets, kids, or gardening) by

visiting the Bonding Site to sign up for a free newsletter, to be notified by email of sales, or to access archives on topics of interest that have been contributed by a community of members.

ICE uses a technique of seduction, relying on known hot buttons based on 5 product or customer profiles to offer something that will be of interest to the customer. The better the profile is, using, for example, demographic or lifestyle data, the more effective the promotion can be in attracting the customer online.

Among the benefits of ICE are that ICE can:

- Provide all or portions of the customer profiles obtained through the 10 SCC and/or through the Bonding Site accessed through a personal computer to sponsoring retail stores to help manage customer relationships in the stores themselves, as well as at retail store web sites. In this way, ICE will be an effective tool in reducing churn at retail store web sites if the customer profile information helps make 15 the sites more relevant and personal to consumers.
- Use customer segmenting and lifestyle analysis in order to promote messages that will be effective in attracting customers online.

ICE represents a new method of integrating offline with online business. In a 20 nutshell, the drivers and benefits of ICE are:

1. Because of the Internet explosion, retail chains are finally racing to catch up in building online businesses.
2. Convention wisdom currently (i.e., early 2000) says that a combination of online and offline (i.e., traditional bricks and mortar) business provides a 25 synergy that is the most effective strategy in achieving good growth potential.
3. One challenge retail chains have is in increasing lifetime values of their customers. A new trend is to inject entertainment into the experience of shopping in retail stores as a means of attracting shoppers to return to a store.
4. Another challenge that any online business has is in attracting and locking in 30 customers to a commercial web site. However, it is evident that many

companies lack a coherent marketing strategy. Is also evident that first-time visitors to many commercial web\_sites never revisit the sites, because the sites are not relevant to the needs of the customer.

5. A company, ICEOP (the "ICE Operator"), uses the electronic marketing network embodied in ICE and is in the position of having an infrastructure in place which could be used to enormous advantage in helping retail chains to compete in cyberspace.
10. By using the services of ICEOP, employing the ICE, retailers can offer their customers an in-store shopping and entertainment environment that increases customer lifetime values both online and offline.
15. ICEOP can benefit by attracting the rush of retail chains eager to build online businesses and by helping them achieve better profits per retail store as well as per manufacturer. Profits can be shared with retailers that result from advertising on the SCC while the customer stands in the checkout line, and from fees paid by manufacturers to promote specific products within the SCC Shopping Program.
20. ICE provides a quick and efficient way to promote online sales, with frequency and reach, to a retailer's customers. Customers standing in checkout lines are typically captive audience in many large stores for 3 to 8 minutes. Well targeted promotions, appealing to a customer's hot-buttons interests, have a good chance of attracting the customer online, either to a retail store's own web site or to the customized merchant window, found on the\_Bonding Site's transactions sector. Either site, using customer profile information, has a good chance at making a sale to the customer.
25. 9. ICE provides a quick and efficient way to build virtual communities and to attract members to the communities. Appealing to customer's interests can attract the customer into a virtual community. Informediaries offer a way to tap the potential of virtual communities.

10. ICE provides an advantage to the developers of business-to-business electronic marketplaces in acquiring buyers and sellers using the Framework building strategy.

5 ICE has three basic components - The Magnet, Communities, and the Framework.

The Magnet is the first part of a multi-step strategy embodied in this invention and consists of several components:

- the SCC,
- 10 • the Bonding Site,
- the ICE printer which optionally serves as a receipt printer,
- the Shopping Program,
- the promotional receipt,
- email promotions that are self-addressed to a shopper's personal email account, and
- 15 • the customer extranet personal account.

The Magnet can be instrumental in helping retail stores attract and keep online customers while building lifetime values.

20 The Magnet is the means of attracting customers in retail stores to return to the store repeatedly and to influence customers to recommend the experience to other people. The Magnet will enhance customer lifetime value, and also encourage the customers to visit designated web sites.

25 Until now, online customer acquisition has been very expensive (e.g., as much as \$80 and more per customer). Furthermore, online customer retention has been a major cause for concern among online businesses. The Magnet provides an effective, yet economical, solution to these challenges.

The Magnet augments the transaction offerings of the retail store by attracting the customer to buy products online. The Magnet also encourages the customer to

develop relationships with other online community members, indulge in fantasy through games, and get information from other virtual community members or from community moderators. With the Magnet, customers can have all four of the Bonding Site sections (i.e., Transactions, Community, Information, and Fantasy), as 5 well as shopping program displays, delivered in a customized format to them. Each visit to a participating store results in messages delivered through the SCC that are relevant and personal to the customer.

In the invention, the word BOND (Building Online Neighborhood Dialogues) means to bind together. In effect, the Bonding Site has the purpose of binding the 10 customers to the retail stores and to the advertisers that buy advertising on the Bonding Site. The Bonding Site serves as an essential part of the Magnet. It helps attract customers that use the SCC to come back to the store to shop again. It also helps to attract the same customers to visit promoted web sites using a personal computer after leaving the store.

15 ICE has an assortment of features that serves as stepping stones on the way to turning a first-time visitor into a valuable customer for a retail store that uses ICE. The Bonding Program entertains the customer standing in the checkout line while offering four basic options: Transactions, Communities, Information, and Fantasy. If the SCC programming is sufficiently creative and attractive to the customer, she will 20 want to return to the store to experience it again. Incentive programs (e.g., points and/or contests) can be used in the SCC programming to encourage return visits.

The SCC runs three main programs: the Shopping Program, the Bonding Site Program, and the Closing Program.

25 The Bonding Site is an ICE web site that the customer first encounters in the store using the SCC but later may revisit from a personal computer (e.g., at home or at work).

Commercial transactions can be made on the Web Store, which is accessible on the Transactions part of the Bonding Site. A retail store using ICE can specify its own customized version of a Bonding Site used by the SCCs in a store. The store can

also specify auxiliary or complementary products that can be sold on its Web Store using a store catalog available online through the Merchant Window.

Special-interest virtual communities that are introduced to a retail store customer and that are accessible on the SCC will be a value that is added to the shopping experience. For example, a customer in a pet store standing in line at the checkout might discover a virtual community related to raising pedigree cats. Since the customer has a pedigree cat, this community is of special interest to her. Since the Bonding Site will also be accessible through a personal computer, this virtual community can be a valuable resource that lets the customer meet others online that are as passionate about her interest as she is.

Auxiliary information related to a store's products, policies, or background which may be available in the store's online catalog can be of special importance in adding value to the customer's shopping experience. Additional information related to the focus of particular virtual communities and mined from the communities' discussions is available on community archives web sites. These various sources of information add to the richness of the customer's experience in shopping at the store. Discussions related to the focused interests of virtual communities provide feedback to ICEOP that can lead to programming opportunities for the Bonding Site that, in turn, will further bond with and creates loyalty in members of the virtual communities.

A fantasy experience in the form of contests, games, or sweepstakes can add to the enjoyment of the shopper. ICE allows customers to track their own continuing progress in a game or a contest between store visits by means of identification techniques (e.g., barcodes on receipts and on PC printouts of shopping lists) that allow customers to maintain continuity between store visits.

The result is that some customers will visit the Bonding Site on a personal computer after leaving the store because they respond to their "hot button" issues that are promoted on the Bonding Site. ICE builds a profile on observed behavior of each customer. The better a customer is profiled, the more likely her hot buttons can be identified. The more the customer specifies a preference, need, want, or desire, the

better the profile will be. The more times the customer touches the ICE system (i.e., either using an SCC in the store or a standard personal computer elsewhere), the more opportunity there will be to build the profile. Therefore, frequency of contact with the customer is a goal as well as the result of ICE. It also happens to be the goal  
5 of the retail merchant. Frequency of contact can be accomplished using a number of methods besides in-store SCC, including e-mail and online coupon marketing.

The Bonding Site should be designed to seduce the customer through a soft sell philosophy:

- Place community, entertainment, and utility before commerce, and the  
10 customer will want to come back, and
- Be of maximum service and convenience to the customer, increasingly identify preferences, make relevant offers, and he will eventually spend money online.

What does the Bonding Site do? It is an ICE web site that:

- 15 • Seduces customers to visit bricks-and-mortar stores and to go online by offering entertaining programming free of charge without any sales pressure to buy something and without obligation,
- Offers targeted content (e.g., editorial column on keeping a pet healthy) to the customer, fantasy (e.g., games and contests related to pets or otherwise),  
20 relationships with people of similar interests (e.g., chat and discussion about German shepherds), and transaction options (e.g., special deals in the local store or online).
- Begins building a Permission Base with the customer. To do this, it
- Makes a number of offers designed to appeal to customers, and
- 25 • Collects information regarding customer preferences which is added to the profile when the customer accepts an offer.

The Bonding Site is analogous to commercial television, which attracts viewers by offering free programming, and then feeds the viewers advertising. From the Bonding Site, which has a much better chance of building the kind of personal

relationship bond that will keep customs coming back than would a typical commercial web site, the transition to visit the retail store web site is easy, because each Bonding Site has links to the sponsoring retail store's web site.

In attracting the customer to the Bonding Site, the goal is to:

- 5     1. To engage the first time customer to start a trust and permission-building marketing cycle. This begins by making attractive offers in order to begin a dialogue and discovering customer hot-button interests, which make possible more relevant promotions designed to satisfy their revealed interests, tastes, and needs.
- 10    2. Bond with or create a relationship with the customer by entertaining her in the checkout line by using the featured communities, games and contests, information, and products for sale. Tools such as online coupon marketing are also available to help bond the customer to the system.

There can optionally be two versions of Bonding Site software: the programming used for a store's SCC, and the programming accessible from a personal computer. Since a typical customer has only a few minutes in the checkout line of a brick-and-mortar retail store, the Bonding program as implemented for use on the SCC may not be designed to allow surfing for a long period of time. The in-store version can provide short clips of transactions, community, information, and fantasy with the option for the customer to go more in depth later using a personal computer. The in-store version Bonding Site experience for the customer can be analogous to the movie previews one sees in a movie theater. The in-store experience ideally might offer tantalizing previews of some features that are available on the full-blown Bonding Site, which is accessible from a personal computer. Throughout the checkout Bonding Site experience in either version, advertisements and promotions will be a component of the programming.

After the customer leaves the store with the receipt, the receipt barcode can be scanned into a digital camera attached to a standard computer or, alternatively, the unique receipt number which can be manually typed in on the keyboard of the

computer. Either case will bring up, by using special browser software, a Bonding Site customized according to rules linked to the customer's profile.

Included in the transactions section of the Bonding Site under the Web Store's Merchant Window is the capability to sell products directly to customers. Retail chain stores choose from an assortment of products and services to offer customers online. The products and services may be auxiliary or complementary to the merchandise sold in the physical stores of the chain. For example in the Merchant Window sponsored by a pet chain store (e.g., PetsMart), local pet hotels in Birmingham, Alabama could offer convenience to pet owners that visit a local branch of the store by allowing online kennel reservation for a period of time when the pet owner plans to be out of town. Services like this available on the Bonding Site serving a pet chain store in the many local communities where there are physical stores would be an attraction and would keep pet owners coming back to the Bonding Site.

People that meet online in virtual communities have an economic value. This is so because the common interest that brings them together often means that they are good candidates for certain advertising and marketing pitches. For example, a discussion group on breeding poodles would be highly receptive to promotions of special formulations of dog food, advertising from local animal hotels and veterinarians, and books on dog training.

In the brief history of virtual communities since around 1994, experience has shown that such communities must typically reach a certain size in number of members to become profitable. Communities become profitable through advertising, and particularly by becoming or collaborating with community member profile brokers (i.e., Infomediaries) that serve as middlemen between community members and advertisers. By rigorously guarding the privacy of community members, community operators will optionally allow the members themselves to control their own profiles on their own personal computers. These community operators will work together with Infomediaries to create value for the members, allowing them to save time and money by matching the needs and interests of members with those of marketers.

ICE helps in building up virtual communities to critical mass sooner, shortening time to reach profitability. It generates, concentrates, and locks in traffic to communities. It generates traffic to communities and encourages memberships in communities by providing the desirable speed in acquiring members. The best 5 technology strategy is based on speed and leverage, and ICE provides it by accelerating virtual community member acquisition and creates the opportunity for member profile building and enhancement.

ICE uses and amplifies the trend toward growing virtual communities by:

- overcoming the fundamental stumbling block in building virtual communities 10 (i.e., the high cost of acquiring members) by providing a quick and economical method of branding communities and seducing customers to visit them, and
- exploiting the relationship-building qualities of communities to lead consumers to commercial web sites and media channels, including retail chain web sites.

15 ICE provides the process of leading retail store customers from the point of sale in a brick-and-mortar retail store to a targeted online community. In this way ICEOP can become the owner and manager of a stable of communities and be the director of membership traffic to others. Merchants will become be willing participants of such community building by guaranteeing them:

- 20 • The overall benefits of ICE, including
- Advertisements in communities, and optionally,
- Masked profile information (i.e., portions of profiles relevant to the retail business) of customers that arrive at the chains web site through the Bonding Site.

25 For example, a typical Infomediary tracks a cat owners community and has analyzed the profiles of its members. The Infomediary then approaches a number of companies marketing animal-related products and services. Armed with aggregate profiles of the community members, the Infomediary asks an organic cat food company to bid for the business of the community members by making special offers.

30 The cat food company is only too happy to oblige, since it can dramatically reduce its

marketing, sales, and distribution costs by selling directly to this qualified group of consumers. The Infomediary then places an advertisement in the virtual community discussion with an offer to the members of 20 percent off on the cat food. Interested community members can respond by going to a special web site hosted by the cat food company.

The value that a community member can get is targeted information, relationships with other community members with similar, focused interests, fantasy from games or contests, and the opportunity to buy things related to the targeted interest.

Communities built out of the core customers of, say, a major retail chain could achieve net values of several million dollars within a year of being implemented based on real examples of communities that have grown as much as 20 percent per month in membership acquisition. Success in the virtual community business hinges not on technology-driven differentiation but on strategies designed to accelerate member acquisition and to create deep understanding of those members. ICE is important to the building of communities due to the speed and economy that it provides. Pundits (e.g. Hagel and Singer) predict that this market will be owned by the company with the first mover advantage. ICEOP has a good chance of being that company, due to the many advantages offered by ICE. Since ICE is a generator of new community members, its operator is in a lucrative position. ICEOP can evolve into being an organizer of customer groups that aggregate online in virtual communities.

Business-to-business ecommerce will be an important application in ICE. This opportunity will revolve around the emerging trend of establishing electronic marketplaces, which will service many of the future needs of retail supply chains. The business-to-business Framework is a mechanism for growing a dynamic electronic marketplace quickly and economically for the benefit of the retail chains that will participate.

One of the largest issues in building business-to-business marketplaces is the chicken and egg dilemma of needing buyers before sellers will join and needing sellers before buyers will join the marketplace. ICE is capable of relieving this problem by

substantially reducing the costs in acquiring a buyer base (i.e., the retail merchants which participate in ICE).

ICE can solve the chicken and egg issue, by aggregating retailers online. Retail store executives will visit business community sites, access industry-related 5 news, and conduct business online while checking their ICE results on special password-accessible private account pages on the merchant extranet.

ICEOP will be able to partner with one or more companies (e.g., VerticalNet) specializing in building online marketplaces that can provide the technical and marketing know-how necessary to succeed.

10 The ICE technical infrastructure required to implement a business-to-business ecommerce market involving the retail chains serviced by ICEOP is named the ICE Framework. It could potentially be even more lucrative than the Magnet or community operations, depending on how the Framework is negotiated with the partners that help in building vertical and horizontal hubs.

15 Vertical hubs comprise aggregates of companies that are brought together to create an electronic market that serve relatively narrow industrial segments (e.g., a vertical supply chain).

20 Horizontal hubs comprise aggregates of companies that are brought together to create an electronic market that serve customers across industrial divisions or sectors (e.g., banking, insurance, advertising)

An example scenario of building the Framework would be when ICE is a new experiment at the retail store, the store manager is interested to find out how well ICE is performing. He logs onto a password protected Merchant Extranet private online account page. There he learns the following information:

- 25
- Total of customer SCC sessions
  - Profile break-downs in segments of customer base
  - Merchant window shopping results
  - Entertainment mix statistics for customers in a retail store
  - Chains site page views linked from the Bonding Site

- Customer extranet sessions
  - Catalog usage statistics
  - Home delivery orders statistics
- Customer survey results
- 5 On the home page of the private account screen, the merchant also notices a number of links which interest him:
- Food Industry News
  - Headlines in Industry
  - Store Manager Discussion
- 10 - Supplier Marketplace
- Manager's Prizes and Points

Meanwhile, a supplier of the retail chain merchant has read an advertisement in a trade publication which has been placed by ICEOP. The supplier responds by visiting the SAMIS web site that promotes the benefit of ICE and by eventually 15 joining the ICE network. The supplier is then able to sell his products to the retail chain on the business-to-business Framework.

A multitude of suppliers in both the vertical and horizontal hubs follow suit by joining the ICE network. Not only are they able to market their products to the retail store chains that participate in ICE, but they are also able to market their 20 products to each other within the context of the business-to-business Framework.

The ICE system knows what the customer of the brick-and-mortar retail store buys and adds that information to the customer's profile record in a database. ICE also keeps track of the customer's clickstream and data input behavior online. The benefits of this information are:

- 25
- ICE builds a profile of the customer's consumer behavior and SCC usage, which deepens over multiple visits to the store.
  - ICE builds a profile also using the customer visits to the Bonding Site from a personal computer (PC).
  - It uses rules, based on customer profiles, that generate promotional messages

that appear on SCC screens and on promotional receipts to attract customers to later visit commercial web sites and multimedia channels from a personal computer, from a television, or from a combination computer/television device.

- 5     • Promotions will be targeted to individuals' hot-button interests.

ICE comprises a computer network which routes data between retail stores and one or more remote databases, a number of SCCs, and one or more checkout points-of-sale and/or kiosks using barcode scanners and printers. ICE includes the following functions.

- 10    • The system employs the SCC identification verification subsystem comprising biometric or other means of identification, click stream uploading, and loyalty card scanning to identify the customer and product barcode scanning to identify what products the customer is buying,

- 15    • In a typical scenario, ICE initially gathers information clickstream data from an SCC during a customer's shopping session. To the system uploads the data to the ICE database where the customer profile information is kept. Later, if the customer acts on the promotions offered on the printed receipt or in the self-addressed email promotional message, she visits the Bonding Site where her profile may be deepened as she generates a new clickstream. Afterwards,

- 20    anytime the customer uses an SCC or visits the Bonding Site from a standard personal computer, the clickstream produced augments and enhances the profile and thus can result in more targeted promotions. Bridging between sessions is accomplished using a customer card, barcodes, cookies, or other means that can be used for user identification.

- 25    ICE proposes to use customer profile data to show promotions on the SCC screen that entice the customer to visit the web site of the brick-and-mortar store, to enter an online contest, or to join an online discussion or chat community related to the business of the store (e.g., pets, sports, or health). For example, customers in a pet store could receive an SCC promotion or a checkout receipt promoting an online discussion group related to breeding pedigree cats if the customer profile indicates

that the customer likes or has a cat. ICE provides for the concentrating of online traffic around topical or demographically-related subjects (e.g., raising pets, kids, or flowers) while extracting valuable profile information from customers that visit web site pages that can be used to deepen the relationship. It does this also with the use  
5 of focused email newsletters and web sites that attract special-interest customers. ICE locks in customers into virtual communities by encouraging the building of personal relationships online between community members, by accumulating and organizing customer-generated content, and by providing specialized games and contests within the context of community focus for each community.

10 The Magnet, Communities, and the Framework represent substantial opportunity to combine elements which until now have been used separately to create a formidable method to build value.

For ICEOP to succeed in the real world, there will be marketing required on several levels in working with ICE:

- 15 1. Retail store customers will have to be shown the value of using the SCC.  
2. Retail chains will have to be shown the value in participating in ICE.  
3. Advertisers will have to be shown the value of the profiles of customers that become virtual community members.  
4. Business-to-business marketplaces will have to be shown the value of profiles  
20 of the retail stores and their managers that go online to check on their ICE results.

The Magnet will increase the customer referral rate, the retention rate, and the lifetime value provided that the customer gets sufficient continuing profit from the Shopping Program, the Closing Program, and the Bonding Site Program and affiliated links. Sufficient continuing profit from the customer's point of view is a direct function of the quality of the customer profiles, how well the promotions target the customer's hot buttons, and how well the promotions that are used remain fresh in the minds of customers.  
25

The Unique Selling Propositions of ICE are:

- 30 1. A means of increasing the lifetime value of retail store customers,

2. A means of quickly building online businesses for traditional retail chains,
3. A means of providing a foundation for a significant Business-To-Business ecommerce enterprise to ICEOP,
4. A way to economically build virtual communities,
5. 5. A way to economically acquire customers for Infomediaries, and
6. 6. A way to generate substantial advertising and promotion revenues on the SCC, using several methods:
  - Advertisements on the SCC during the time that the customer is standing in the checkout line,
  - Messages from product manufacturers promoting specific products during the shopping session,
7. 7. A way of creating a multimedia educational or entertainment channel, with consumers funneled to it by the self-addressed promotional email program available to the user of an SCC, by means of the Bonding Site Program and the Closing Program.

When a customer in a retail chain store encounters an entertainment medium that is sufficiently attractive and that offers an incentive to return to the store, the customer will feel motivated to return to the stores again and again.

Features that makes ICE unique include

- 20 • ICE is a process and a method that provides a new and economical solution to the problem of attracting and keeping Internet customers.
- It is a novel technique of one-to-one hot-button marketing in retail stores.
- It gives ICEOP a comprehensive strategy for achieving leadership in providing retail chains the means to compete on the Internet.
- 25 • It offers a way of solving the chicken and egg dilemma in business-to-business ecommerce by bootstrapping buyers (i.e., the retail merchants) in supply chains into electronic marketplaces.

Following is listed some of the advantages of PUMP to the stakeholders.

Advantages of PUMP for the customer

- (a) provides a convenient way to purchase particular products and services;
- (b) allows customers to obtain information and entertainment;
- (c) provides a timesaving method of buying consumable, rechargeable, and other types of products and services. Examples include groceries, bathroom products, long distance telephone service, cellular telephone service, and paging service. Such products and services are bought using the convenience of a customer's own standard personal computer at home or at work, or from any standard personal computer with access to the Internet;
- 5 (d) allows visitors to a commercial web site to exchange information among themselves by visiting one or more standard computer chat rooms or discussion groups; and
- 10 (e) educates the customer about the full range of products and services available on the Web Store (e.g., "We also can offer you paging service").

15 Advantages of ICE for the customer

- (f) Provide new ways for retail chain customers to benefit by offering
  - Free email discussion newsletters on a variety of topics, including pets, family, hobbies, and health. Customers themselves would contribute the majority of content in the newsletters.
  - 20 • Web sites, owned and operated by ICEOP and offering advertising to retail stores, that offer archived community member discussions, with topics searchable by means of on-site search engines.

Advantages of PUMP for the Retail Merchant

- 25 Before a retail merchant has signed up to participate in the invented process, SAMIS assists the prospect in making a decision to join the network, because it:
- (a) allows merchants to obtain information regarding product categories, and information and product packages available from the various Fulfillment Houses;

- (b) gives statistics concerning real-world results of stores using PUMP according to geographic area, industrial classification, store sizes, and other classifications;
- (c) gives a first-hand view of the Web Store sample screens in various industries;
- 5 (d) lets the merchant either run through a simulation of the purchase scenario or allows the merchant to place a real purchase, receive a real email receipt, and receive delivery of the product to experience first hand what retail customers experience;
- (e) allows the merchant to view and enter the Portal Window of the Web Store;
- 10 (f) lets the merchant return multiple times to the Web Store to see what the possible results of cookie and database marketing for customers that return again and again to the merchant's business;
- (g) demonstrates hyperlinks and banner advertisements promoting the retail merchant's store;
- 15 (h) shows how a merchant's web site can be linked to the Web Store;
- (i) provides a time-saving method of calculating theoretical benefits to the merchant's store;
- (j) educates the merchant about the full range of products and services available through PUMP by accessing the Fulfillment House Database (e.g., "We also 20 can offer you full office support service in payroll, accounting, and inventory management."); and
- (k) offers to train the merchant in service marketing to differentiate his store from the competition.

In addition, once the retail merchant participates in the service, he or she 25 enjoys additional benefits, because PUMP:

- (l) increases merchant's revenues with no additional inventory cost;
- (m) sells virtual inventory at no extra cost or risk to the merchant;
- (n) eliminates pilferage for select inventory items;
- (o) maintains and improves the merchant's customer base;
- 30 (p) potentially increases the customer's visit frequency;

- (q) provides access to accounting sales data online from products and services sold electronically;
- (r) provides benefits from specially targeted vendor discounts;
- (s) provides a way for a merchant to promote a particular web site;
- 5 (t) stimulates more product or service consumption (e.g., cellular phone airtime usage) because of the ease of replenishment; and
- (u) provides an opportunity to advertise and promote merchant stores via customer-requested e-mail and banner ads to customers who buy services through the Web Store.

10

Advantages of ICE for the Retail Merchant

- (v) The Bonding Site and the Shopping Program will be the perfect medium for the retail store to cross-sell and up-sell the customer as well as promote the store's own web site. For example, while a store chain already may have a well-developed web site, the Bonding Site would provide a stepping-stone approach that would incrementally prepare or condition, psychologically, the customers to visit it, in a similar way that network television prepares viewers to patronize the network advertisers.
- (w) ICE provides a new means of conducting permission marketing for retailers. It provides a medium in a new setting (i.e., the SCC in a retail store) that allows one-to-one communication with customers.
- 15 (x) Since Internet concerns are increasing in priority among retail chains, ICE provides a cheap way to promote a chain store web site, with frequency and reach, to a chain's customers. ICE transforms and augments the way electronic marketing networks are used. It provides a new medium that grabs attention share of the customers in a store at a time (i.e., while standing in the checkout line) when shoppers normally are bored and would welcome entertainment.
- 20 (y) ICE improves in-store sales and draws customers to the retail store web site.

- (z) ICE lets email newsletters targeted to customer clusters provide an effective yet inexpensive way for the store to advertise in communities that store customers have registered in.
- 5 (aa) ICE benefits merchants by improved customer retention, improved referral rate, improved share of customer's spending, and possible reduction in marketing costs.
- (bb) ICE provides market research intelligence that is captured from the virtual communities in almost real time. This feedback from customers could be the basis for quick store reactions to new trends.
- 10 (cc) ICE builds end consumer loyalty to retail stores and increases customer lifetime value to stores. Loyalty is improved by adding value to the customer experience with the store. Increased customer loyalty helps the store to build a permission base with the customer.
- (dd) ICE changes the media mix to develop better two-way communication between the customer and the retail store.
- 15 (ee) ICE promotes virtual communities as well as retail chains' web sites on the SCC display to each customer.
- (ff) ICE uses email newsletters provide a forum for the store to advertise its local bricks and mortar location as well as a means of providing a permission marketing channel. The virtual communities provide a cheap way for retail chains to build business online and off.
- 20 (gg) ICE provides frequent contact with customers by means of messages on SCCs, at store checkouts on receipts, on the Bonding Site from a personal computer, in email newsletters, and personal communications to community members online. Studies have revealed that number of contacts (i.e., frequency), not their length or medium, is a prime determinant in customer satisfaction.
- 25 (hh) ICE improves understanding of the customer by building a customer permission base that enhances the customer profile.

- 5 (ii) Community archival sites draw customers to ebusiness sites and use the archives as well as affinity content and commerce to draw customers repeatedly to the community site. When the value of the community reaches a certain level and the information in the community Site archives reaches a certain value, ICEOP can produce video clips that are available on the Bonding Site. These clips would contain information of interest regarding the community and would also promote the community.

10 (j) Collect additional profile information on customers and build a permission base with them. Properly managed, this permission base will increase customer lifetime values both offline in the retail stores and online at the retail store web site.

#### Advantages of PUMP for the Wholesaler

The present invention helps wholesalers by giving them an edge over  
competitors because:

- (a) it provides the wholesaler an opportunity to advertise, promote, and sell additional products and services directly to retail merchants by means of promotions (e.g., hyperlinks, banner ads, etc.) on proprietary merchant account pages on the PUMP Merchant Extranet;

20 (b) it provides an additional channel (i.e., online) to market products and services to end consumers; and

(c) it provides an excellent means to collect market research information.

#### Advantages of PUMP for the Fulfillment House

25 PUMP benefits the Fulfillment House, because:

- (a) it provides a streamlined process to bring in new business;
  - (b) it connects the Fulfillment House with the value network of PUMP;
  - (c) it provides a stream of market feedback regarding what retail businesses would like to offer their customers; and
  - 30 (d) it gives the Fulfillment Houses a chance to market their products.

Advantages of PUMP for the Portal Company

PUMP benefits a contracted Internet portal company, because:

- (a) it converts a brick-and-mortar retail store shopper into a portal visitor;
- 5 (b) it offers a way to jump start hundreds of thousands of visitors visiting the portal site relatively quickly;
- (c) it promotes establishing a base of regular portal customers;
- (d) the Web Store advertises and promotes the portal business through banner ads and customized, dynamic, and targeted hyperlinks keyed to an individual
- 10 visitor's recorded purchase and browsing history, as well as to information volunteered by the visitor;
- (e) promotions in the retail business promote the portal business; and
- (f) it provides a method of directing customers through a web portal that leads to other sites, including PUMP affiliated web sites.

15

Advantages of PUMP for the Vendors That Sell to the Retail and Wholesale Merchant and to the End Consumer

- (a) PUMP helps various vendors to market to highly targeted retail and wholesale merchants through ancillary pages linked to proprietary merchant account pages. This is possible when retail and wholesale merchants use PUMP service, because they offer to provide information about their businesses if the vendor can offer them a benefit in exchange. PUMP thus serves as an information agent, sharing information between the service users.
- 20 (b) Specialized vendors are able to market to retail store owners on the private information page of each merchant.
- (c) Vendors are able to save end consumers time and money by offering them exactly what they want by obtaining detailed anonymous consumer profiles from the PUMP operator.

Advantages of PUMP for the Sales Agent

- 30 (a) PUMP provides a system for distributing online product and sales training

information to sales agents.

- (b) PUMP allows sales agents to update and monitor their account information by means of a password-protected Extranet.

5 Advantages for the PUMP Operator

- (a) PUMP provides a potentially lucrative business opportunity by giving the above participants a new model that facilitates working together in a way that benefits all involved. The PUMP operator imposes a small surcharge on the respective business participants for the use of the PUMP network infrastructure.
- (b) PUMP provides a general business system that can be custom applied to many industries.
- (c) PUMP provides a tool that saves money related to sales and marketing costs by being quicker and more efficient than traditional methods of sales and marketing, including in-person sales meetings and marketing by means of snail-mail post.
- (d) Finally, PUMP provides a mechanism for collecting marketing information from PUMP users.

20 Advantages of ICE for media companies

Traditional media, including the television and film industries, have also faced the expensive proposition of attracting viewers. In view of the fact that media companies are in the business of selling viewers to advertisers, they would benefit from an economical method of attracting targeted audiences. The Bonding Site offers a means of showing multimedia preview clips to shoppers standing in the checkout lines of brick-and-mortar retail stores. Viewers interested in a clip can indicate interest in order to later be automatically connected to a program by using a self-addressed promotional email message.

30 Advantages of ICE for commercial web sites

PUMP proposes to attract retail store shoppers to commercial web sites by displaying promotional messages on the SCC screen, as well as printing promotional messages on receipts or point-of-sale printouts.

5     Advantages of ICE for the ICE Operator, ICEOP

- (a) As the percentage of shoppers that are online increases and as market segment research reveals the appropriate messages to attract customers, the Magnet will rapidly jump start virtual communities. For example, one virtual community may be about raising cats. A market segment could be new parents with a cat that need advice on raising cats with infants.
- (b) Whenever a brick-and-mortar store customer registers in a virtual community through the Bonding Site, ICEOP will know about it, and adds that community membership information to the customer's profile.
- (c) ICEOP owns the customer profile, but can release a negotiated portion of the profile to the store to allow the store to market to the customer on the next use of the SCC.

15     Advantages of ICE for the Manufacturer

- 20     • The SCC allows manufacturers to influence buying behavior while the customer is in the shopping aisles of a retail store.
- 25     • ICE allows manufacturers to broaden their media communication strategy by targeting identified email newsletter receivers in specified categories and sending them messages (i.e., ad, promotional content, etc.). By using relevant and personalized messaging, based on profiles, manufacturers can influencing purchase behavior without having to give away cash-value coupons and rebates.

4. Brief Description of the Drawings

Various aspects and processes of PUMP and ICE are illustrated in the  
30 following diagrams and flowcharts:

Referring to Fig. 1, a flow chart is presented showing four principle stages of one embodiment of the PUMP business system.

Referring to Fig. 1a, a schematic is presented to show an exemplary embodiment of an ICE Configuration diagram.

- 5 Referring to Fig. 1b, a schematic is presented to show an exemplary embodiment of a PUMP Functions diagram.

Referring to Fig. 1c, a schematic is presented to show an exemplary embodiment of a Shopping Cart Computer (SCC) Functions diagram.

- 10 Referring to Fig. 2, a schematic is presented showing an exemplary embodiment of a Core Business System (CBS) functional diagram.

Referring to Fig. 3, a flow chart is presented showing an exemplary embodiment in-store electronic sales process.

Referring to Fig. 4, a schematic is presented showing an exemplary embodiment of the PUMP P1 functional diagram.

- 15 Referring to Fig. 5, an exemplary embodiment flow chart is presented illustrating how retail store customers might be drawn into using a Web Store embodiment.

Referring to Fig. 6, a flow chart is presented showing a scenario comprising a visit to a Web Store embodiment.

- 20 Referring to Fig. 7, an exemplary schematic of an embodiment is presented to show the functional interconnections from a customer placing an order to a Fulfillment House delivering a product.

Referring to Fig. 8, a flow chart is presented to show an exemplary embodiment of what might happen when a customer visits a Merchant Window.

- 25 Referring to Fig. 9, a flow chart is presented to show exemplary choices a viewer has in an embodiment of a Portal Window.

Referring to Fig. 10, a schematic is presented to show exemplary cross-linking between an embodiment of a merchant web page on the Web Store and a merchant's home page.

Referring to Fig. 11, a schematic is presented to show possible functional interconnections for making a Portal Window a valuable resource to a customer.

Referring to Fig. 12, a functional diagram shows an embodiment of a Sales And Marketing Information System (SAMIS).

5 Referring to Fig. 13, a flow chart is presented to show an exemplary process for drawing merchants to a SAMIS web site, providing information about benefits of PUMP to a merchant, and allowing a merchant to sign up on SAMIS to begin using the service.

10 Referring to Fig. 14, a flow chart is presented to show some possible steps a merchant can follow in applying for PUMP service through a SAMIS automated signup process.

Referring to Fig. 15, a flow chart is presented to show some possible steps a merchant can follow to program an existing standard credit-card-type of terminal in his store.

15 Referring to Fig. 16, a schematic is presented to show that, as new markets are added, the number of customers grows.

Referring to Fig. 17, a flow chart is presented to show exemplary steps for preparing PUMP to expand into a new market.

20 Referring to Fig. 18, a schematic is presented to show exemplary functional interconnections and data flows for an embodiment of PUMP PM, the Infomediary business model.

Referring to Fig. 19, a flow chart is presented to show an embodiment in which PUMP users have two ways of accessing information regarding PUMP: They may telephone a call center, or they may access a PUMP Extranet web site online.

25 Referring to Fig. 20, a flow chart is presented to show an embodiment of the flow of a purchase order, from either a standard credit-card-type of terminal or from a Web Store, to a Fulfillment House.

Referring to Fig. 21, a flow chart is presented to show an embodiment in which testing, deployment, and upgrading PUMP scope and functionality is executed 30 in several exemplary stages.

Referring to Fig. 22, a flow chart is presented to show an embodiment in which exemplary stages of the PUMP lifecycle are executed for establishing the components of an Infomediary business.

- Referring to Fig. 23, a simplified diagram is presented to show exemplary steps  
5 in the Customer Relationship Management (CRM) Process.

Referring to Fig. 24, a flow chart is presented to show an exemplary process for using a PUMP Point-Of-Sale (POS) Magnetizing Process.

Referring to Fig. 25, a flow chart is presented to show an exemplary procedure necessary for building a product-rebate coupon in PUMP.

- 10 Referring to Fig. 26, a flow chart is presented to show an exemplary process to alert a PUMP user using an email notification service.

Referring to Fig. 27, a simplified diagram is presented to show exemplary possible participants of an Infomediary.

- 15 Referring to Fig. 28, a diagram is presented to show exemplary possible components of a Web Store Home Page.

Referring to Fig. 29, an exemplary embodiment is shown of an Internet Portal Company Home Page.

Referring to Fig. 30, an exemplary embodiment is shown of a Customer Profile Building Process.

- 20 Referring to Fig. 31, an exemplary embodiment is shown of a Profile Building Process of PUMP Business Users.

Referring to Fig. 32, a schematic is presented to show an exemplary embodiment of the ICE System components.

- 25 Referring to Fig. 33, a schematic is presented of an exemplary embodiment of the Magnet Subsystem.

Referring to Fig. 34, a flowchart is presented to show an exemplary embodiment of the Magnet Process.

Referring to Fig. 35, a flowchart is presented to show an exemplary embodiment of the Shopping Program Process.

Referring to Fig. 36, a schematic is presented to show an exemplary embodiment the Promotional Message SCC Screen.

Referring to Fig. 37, a schematic is presented to show an exemplary embodiment of Product Promotional Messages.

5 Referring to Fig. 38, a flowchart is presented to show an exemplary embodiment of the Bonding Site Programs Process.

Referring to Fig. 39, a schematic is presented to show and exemplary embodiment of the Bonding Site Promotions.

10 Referring to Fig. 40, a schematic is presented to show and exemplary embodiment of the Bonding Site Screen.

Referring to Fig. 41, a flowchart is presented to show an exemplary embodiment of the Self-Addressed Promotional Email Process.

Referring to Fig. 42, a schematic is presented to show an exemplary embodiment of Self-Addressed Promotional Email received on a PC screen.

15 Referring to Fig. 43, a schematic is presented to show an exemplary embodiment of Rule-Based Promotions.

Referring to Fig. 44, a schematic is presented to show an exemplary embodiment of a Promotional Sales Receipt.

20 Referring to Fig. 45, a schematic is presented show an exemplary embodiment of a Shopping Cart Computer Subsystem.

Referring to Fig. 46, a schematic is presented to show an exemplary embodiment of a Position Sensor.

Referring to Fig. 47, a flowchart is presented to show an exemplary embodiment of a Closing Program Process.

25 Referring to Fig. 48, a flowchart is presented to show an exemplary embodiment of a Community Building Process.

Referring to Fig. 49, a schematic is presented to show an exemplary embodiment of Community Aggregation Using the Bonding Site.

30 Referring to Fig. 50, a flowchart is presented to show an exemplary embodiment of a Framework Building Process.

Referring to Fig. 51, a schematic is presented to show an exemplary embodiment of a Merchant Extranet Screen.

Referring to Fig. 52, a flowchart is presented to show an exemplary embodiment of a Process to Attract Suppliers to the Framework.

5 Referring to Fig. 53, a flowchart/schematic is presented to show an exemplary embodiment of a Suppliers Extranet Screen.

Referring to Fig. 54, a schematic is presented to show an exemplary embodiment of the Web Store on the Bonding Site.

10 Referring to Fig. 55, a schematic is presented to show an exemplary embodiment of an Identification Key.

Referring to Fig. 56, a flowchart/schematic is presented to show an exemplary embodiment of the Framework Infrastructure.

Referring to Fig. 57, a schematic is presented to show an exemplary embodiment of the Customer Extranet Personal Account Screen.

15 Referring to Fig. 58, a schematic is presented to show an exemplary embodiment of a PUMP Business System Lifecycle.

## **5. Reference Numerals and Exemplary Components in Drawings**

The schematics and processes included in various embodiments of PUMP are 20 illustrated in the diagrams and flowcharts of the following figures.

Several labeling conventions are also used: Flow chart steps are labeled with small letters. Functional blocks in schematic diagrams are labeled with numerals, whereas information flows are labeled by small letters next to arrows to indicate the flow direction.

25 Data traffic between databases and extranets is described generally as belonging to an entire class of data users (e.g., all of the retail merchants participating in PUMP marketing). Data traffic between extranets and a data user (i.e., vendor, wholesaler, retail merchant, or customer) is described as belonging to a specific user (e.g., one specific retail store participating in PUMP marketing that has specific needs 30 and requirements).

Logical connections are indicated in the schematics and flow charts by an upper case letter encircled.

Principle exemplary components in each figure can include one or more of the following:

- 5 A. An exemplary ICE configuration is shown in Fig. 1a. An exemplary embodiment comprises PUMP and the Shopping Cart Computer (SCC) as optional components.

A diagram of exemplary PUMP functions is shown in Fig. 1b. The  
10 numbering of the functional blocks is explained below.

3. Customer purchase behavior profiles are produced and maintained by:

- Encouraging the use of customer anonymous or personal identification at the point-of-sale,
- 15 • Building a purchase history profile in a database using product scanning at point-of-sale, by means of a barcode scanner,
- Applying rules to the customer profile to determine the appropriate promotion(s), and
- Printing a printout with one or more promotions on it.

20 Whereby, promotions delivered to the customer are targeted based on profiles of the customer, of the store, and/or of one or more products purchased.

4. A barcode is printed on the receipt, wherein:

- A purchase order for a consumable commodity may be entered into an electronic terminal located in a business,
- 25 • A customer receives an account identification number expressed in a bar code at POS at the time of purchase relating to the commodity purchased,
- The consumable commodity is delivered to the customer, and

- The customer can use the barcode to identify the account number while making a replenishment purchase of the commodity,  
Whereby the customer can replenish a commodity to be refilled in the same account conveniently by presenting the barcoded account number at the 5 point-of-sale.

5. The Bonding Site offers a number of attractions to the customers of the retail store, including optionally:

- commercial transactions,
- 10 • specialized information,
- online community memberships, and
- fantasy programming.

Whereby, the Bonding Site can offer a wide range of commercial, educational, cultural, and entertainment resources.

15

6. The Bonding Site can be accessed by:

- obtaining a receipt, with an identifying barcode on it, from a participating retail store,
- 20 • scanning the barcode on the receipt into a digital camera that is attached to a standard personal computer,
- decoding the barcode using decoding software, and
- activating a special browser that can read the information encoded in the barcode, resulting in accessing the Bonding Site.

Whereby, the barcode provides a means to link the customer profile 25 produced by purchase behavior to a Bonding Site session, and  
Whereby the Bonding Site session can be configured according to the customer's profile.

7. The Bonding Site allows commercial transactions in a number of different

modes, including:

- the Web Store,
- the retail store web site, and
- affiliated web sites.

5 Whereby, a number of commercial web sites are conveniently made accessible to the customer through the Bonding Site URL.

8. The Web Store provides several optional functions:

- Portal Window,
- Infomediary Window, and
- Merchant Window.

Whereby, the Web Store provides a customizable web site that provides commercial transaction opportunities to the customer.

15 9. The Portal Window provides one or more hyperlinks that access the web sites of Internet portal companies.

10. The Infomediary Window provides one or more hyperlinks that access the web sites of Infomediary companies.

20 11. The Merchant Window provides a number benefits to customers including:

- One or more catalogs that offer for sale commodities to the customer, and that are customizable by the sponsoring retail merchant, and
- Information chosen by the sponsoring retail merchant.

Whereby, the Merchant Window offers to the retail merchant a means of capturing a larger share of the customer's discretionary spending.

12. The catalogs offered include:

- Inventory items that a traditional retail store has on its shelves for sale, and/or
- Inventory items that a retail store does not have on its shelves for sale but which may be ordered online for special delivery.

5 Whereby, the catalog of a retail store supports the speed shopping function, and

Whereby the catalog of a Fulfillment House can complement the inventory selection of the retail store.

10 13. The products offered to the customer from a catalog that are not on the shelves of the retail store may be:

- purchased from a Fulfillment House, and
- sent to a shipping address.

Whereby, the sponsoring retail store can earn a commission on the sale.

15

14. The customers interested in transactions can click on hyperlinks that accesses one or more web sites of the sponsoring retail store. The retail store can use profile information collected by the ICE network to make its web sites more attractive to customers.

20

15. The online virtual communities offer customers a number of benefits:

- Access online to special-interest groups with the potential to form relationships with members of such groups,
- Access to archival information collected in online communities, and
- Access to marketers offering special promotions to the members of online communities.

Whereby, customers can give and get special-interest, useful information.

25 16. The Infomediaries perform several important functions:

- Collect profiles of the individuals in virtual communities,
- Aggregate the profiles of groups of individuals in virtual communities, and
- Recruit marketers to make offers to virtual community members, based on aggregated anonymous profiles.

5

Whereby, customers receive the marketing messages precisely targeted according to aggregated group profiles, and

Whereby, marketers receive information on and contacts with highly qualified sales prospects.

10

17. The customers receive information regarding:

- Promotions and advertisements, and
- Specific topics requested by the customer,

Whereby, the Bonding Site provides an effective medium for  
15 communicating with the customer.

18. The customer can enjoy fantasy programming, including:

- Games,
- Contests, and
- Multimedia.

20

Whereby, the Bonding Site provides entertainment, education, and/or information value to the customer.

19. The games can be played in several ways:

- 25
- By oneself, and
  - With other participants on the Bonding Site.

Whereby a game can be continued between gaming sessions by one or more participants.

20. The contests can be played in several ways:

- By oneself, and
- With other participants on the Bonding Site.

Whereby a contest can be continued between Bonding Site sessions by one  
5 or more participants.

21. Multimedia programming on the Bonding Site is available in the following  
forms:

- Video,
- 10 • Audio,
- Graphics, and
- Text.

Whereby, the customer can access programming on demand from a  
standard computer, television, or combination computer/television device.

15

22. The Retail Merchants and Suppliers can be attracted to use the network by  
means of a Sales And Marketing Information System (SAMIS), wherein:

- SAMIS comprises the means to demonstrate at a SAMIS URL the  
benefits of using the ICE network,
- 20 • SAMIS comprises the means of attracting, educating,  
communicating with, and recruiting retail merchants, wholesalers,  
and vendors,

Whereby the merchants and suppliers can interact with the SAMIS URL to  
obtain simulated results that relate to input provided by the merchants and  
25 suppliers.

23. The retail customer activity at the Bonding Site attracts retail merchants to  
a merchant extranet in order to see:

- a customer activity report summary window, and

- a Framework marketplace window.

Whereby, the merchant has a private account that indicates the results from customer activity on the Bonding Site, and

5 Whereby, the merchant can participate in the Framework electronic marketplace from the private account pages on the merchant extranet.

24. The Merchant Extranet Summary Window has the following features:

- financial results from customer visitation of the Bonding Site, and
- customer performance result information on the Bonding Site.

10 Whereby, the merchant can make business decisions based on the market feedback obtained.

25. The Framework marketplace window offers access to:

- Industry information from syndicated news service,
- 15 Framework electronic marketplace where buyers specify their needs and sellers offer commodities for sale, and
- Online community where managers can give and get information from their peers.

20 Whereby, the retail merchant can receive information and transact commerce, and

Whereby, the retail merchant can provide information to and get information from a virtual online community helpful in running a retail business.

26. The Framework electronic marketplace offers:

- 25 • Online catalogs from suppliers,
- Infomediary services matching buyers to sellers, and sellers to buyers, and
- Online transactions between buyers and sellers.

Whereby, buyers and sellers benefit from an efficient means of exchange.

27. The retail merchant activity on the merchant extranet attracts suppliers to a vertical hub extranet in order to see:

- 5 • a retail merchant report window, and
- a Framework marketplace window.

Whereby, the supplier has a private account that indicates the results of customer or prospective customer activity on the merchant extranet, and

Whereby, the supplier can participate in the Framework electronic marketplace from private account pages on the vertical hub extranet.

10

28. The Vertical Extranet Hub report window has the following features:

- financial results from retail merchant visitation of the merchant extranet, and
- retail merchant performance result information on the merchant extranet.

15

Whereby, the supplier can make business decisions based on the market feedback obtained.

20

29. The Framework marketplace window offers access to:

- Industry information from syndicated news service,
- Electronic marketplace where buyers specify their needs and sellers offer commodities for sale, and
- Online community where managers can give and get information from their peers.

25

Whereby, the supplier can transact commerce, and

Whereby, the supplier can provide information to and get information from a virtual online community helpful in running a supplier business.

30. The retail merchant activity on the merchant extranet attracts suppliers to a

horizontal hub extranet in order to see:

- a retail merchant report window, and
- a Framework marketplace window.

Whereby, the supplier has a private account that indicates the results of  
5 customer or prospective customer activity on the merchant extranet, and

Whereby, the supplier can participate in the Framework electronic  
marketplace from private account pages on the horizontal hub extranet.

31. The Horizontal Hub Extranet report window has the following features:

- 10
- financial results from retail merchant visitation of the merchant  
extranet, and
  - retail merchant performance result information on the merchant  
extranet.

Whereby, the supplier can make business decisions based on the market  
15 feedback obtained.

32. The Framework marketplace window offers access to:

- 20
- Industry information from syndicated news service,
  - Electronic marketplace where buyers specify their needs and sellers  
offer commodities for sale, and
  - Online community where managers can give and get information  
from their peers.

Whereby, the supplier can transact commerce, and  
Whereby, the supplier can provide information to and get information  
25 from a virtual online community helpful in running a supplier business.

A diagram of exemplary shopping cart computer functions is shown in Fig. 1c.

34. The Shopping Programs offer to the customer the following benefits:

- Time-saving during a shopping session, and
- Money saving during a shopping session.

Whereby, the retail merchant has a means of improving the lifetime values of customers by increasing customer loyalty, and

5 Whereby, manufacturers have a new means of communicating promotions to shoppers.

35. An identity verification means serves to:

- Positively identify a customer, and/or
- Positively identify an earlier shopping session.

Whereby, a customer can access a private customer extranet account from the SCC, and/or

Whereby, a customer can continue the benefits from a previous shopping session.

15

36. The customer extranet provides a customer with a personal account that serves to:

- Manage shopping list records from given stores,
- Manage a reminder service alerting the customer to events,
- Manage hyperlinks to online communities of interest,
- Manage hyperlinks to web sites of interest,
- Maintain a personal profile.

Whereby, the customer that invests time in building a personal customer extranet account will be likely to continue to patronize a retail store that uses the services of the extranet.

25  
37. The customer can use speed shopping program to:

- Access a specified shopping list from a personal account from the customer extranet,

- Access the store online catalog to augment the shopping list, and
- Display the shopping list, the store layout, and the product location within the store.

Whereby, the customer can specify a shopping list by accessing the retail  
5 store's online catalog from a standard personal computer or from the SCC and  
loading the shopping list into the customer's personal extranet account.

38. The product category promotions available through the Shopping  
Program:

- 10
  - Promote a product in the same category as one of the products in  
the customer's shopping list, and
  - Explain on the screen of the shopping cart computer the benefit of  
the promoted product.

Whereby, the customer realizes monetary savings, increased quality, or  
15 other benefits,

Whereby, product manufacturers have a channel of promoting products,  
and

Whereby, retail merchants can derive revenues from product promotions.

20   39. The product positional promotions available through the Shopping  
Program:

- 25
  - Promote a product in the immediate vicinity of the shopping cart,  
and
  - Explain on the screen of the shopping cart computer the benefit of  
the promoted product.

Whereby, the customer realizes monetary savings, increased quality, or  
other benefits,

Whereby, product manufacturers have a channel of promoting products,  
and

Whereby, retail merchants can derive revenues from product promotions.

40. The recipe promotions available through the Shopping Program:

- Promote one or more recipes containing one of the products in the customer's shopping list, and
- Give the shopper the opportunity to buy additional products needed to complete one or more recipes.

Whereby, customers enjoy cooking and recipe suggestions while using the SCC, and

10 Whereby, the retail store can sell more products in helping customers to fulfill recipes.

41. A version of Bonding Site programming suitable for in-store use on a shopping cart computer provides the customer with the capability to:

- 15
- Transact commerce,
  - Access online communities,
  - Acquire information, and
  - Enjoy a fantasy programming.

Whereby, the Bonding Site can offer a wide range of commercial,  
20 educational, cultural, and entertainment resources.

42. The Bonding Site allows transactions in a number of different modes, including:

- 25
- the Web Store,
  - the retail store web site, and
  - affiliated web sites.

Whereby, a number of commercial web sites are conveniently made accessible to the customer through the Bonding Site URL.

43. The Web Store provides several optional functions:

- Portal Window,
- Infomediary Window, and
- Merchant Window.

5 Whereby, the Web Store provides a customizable web site that provides commercial transaction opportunities to the customer.

44. The Portal Window provides one or more hyperlinks that access the web sites of Internet portal companies.

10

45. The Infomediary Window provides one or more hyperlinks that access the web sites of Infomediary companies.

46. The Merchant Window provides a number benefits to customers including:

15

- One or more catalogs that offer for sale commodities to the customer, and that are customizable by the sponsoring retail merchant, and
- Information chosen by the sponsoring retail merchant.

Whereby, the Merchant Window offers to the retail merchant a means of 20 capturing a larger share of the customer's discretionary spending.

47. The catalogs offered include:

- Inventory items that a traditional retail store has on its shelves for sale, and/or
- Inventory items that a retail store does not have on its shelves for sale but which may be ordered online for special delivery.

Whereby, the catalog of a retail store supports the speed shopping function, and

Whereby the catalog of a Fulfillment House can complement the inventory

selection of the retail store.

48. The products available through a catalog that are not on the shelves of the retail store may be ordered from a Fulfillment House, whereby the 5 sponsoring retail store can earn a commission on the sale.
49. The customers interested in transactions can click on hyperlinks that accesses one or more web sites of the sponsoring retail store. The retail 10 store can use profile information collected by the network to make its web sites more attractive to customers.
50. The online virtual communities offer customers a number of benefits:
  - Access online to special-interest groups with the potential to form relationships with members of such groups,
  - Access to archival information collected in online communities, and
  - Access to marketers offering special promotions to the members of online communities.

Whereby, customers can give and get special-interest, useful information.

- 20 51. The Infomediaries perform several important functions:
  - Collect profiles of the individuals in virtual communities,
  - Aggregate the profiles of groups of individuals in virtual communities, and
  - Recruit marketers to make offers to virtual community members, 25 based on aggregated anonymous profiles.

Whereby, customers receive the marketing messages precisely targeted according to aggregated group profiles, and

Whereby, marketers receive information on and contacts with highly qualified sales prospects.

52. The customers receive information regarding:

- Promotions and advertisements, and
- Specific topics requested by the customer,

5 Whereby, the Bonding Site provides an effective medium for communicating with the customer.

53. The customer can enjoy fantasy programming, including:

- Games,
- Contests, and
- Multimedia.

10 Whereby, the Bonding Site provides entertainment, education, and/or information value to the customer.

15 54. The games available on the Bonding Site can be played in several ways:

- By oneself, and
- With other participants on the Bonding Site.

20 Whereby a game can be continued between gaming sessions by one or more participants.

20

55. The contests available on the Bonding Site can be played in several ways:

- By oneself, and
- With other participants on the Bonding Site.

25 Whereby a contest can be continued between Bonding Site sessions by one or more participants.

56. The multimedia programming on the Bonding Site is available in the following forms:

- Video,

- Audio,
- Graphics, and
- Text.

Whereby, the customer can access programming on demand the SCC.

5

57. A closing program offers the following benefits to the customer at the end of a shopping session in a retail store:

- A summary of all the important decisions the shopper has made in the course of the shopping session, and
- Promotional offerings to the customer, based on the customer profile.

10

Whereby, the customer can choose whether or not to accept the offerings promoted.

15 58. The Closing Program summary optionally includes:

- items purchased,
- game and contest results,
- choices made,
- preferences indicated, and
- one or more elements of the personal profile.

20

Whereby, the information in the summary adds value to the customer's shopping experience.

59. The Closing Program promotional offerings can include:

- 25
- one or more offers to buy or sell commodities,
  - offers to participate in an online community,
  - offers to receive information, and
  - offers to receive multimedia programming.

Whereby, when the customer identifies himself/herself to the network, the

customer profile is defined more accurately with each shopping session using the SCC,

Whereby, when the customer identifies himself/herself to the network, the customer profile is defined more accurately with each Bonding Site session using a  
5 standard personal computer, and

Whereby, as the customer profile is defined more accurately, the offers presented to the customer on the SCC display become more relevant to the needs, wants, and preferences of the customer.

10 60. The customer can send a self-addressed email promotional message to herself/himself from the SCC, where:

- the customer accepts one or more offers presented on the shopping cart computer screen,
- the email promotional message received in the personal email box of the customer contains one or more hyperlinks related to the offers, and
- the customer can click on a hyperlink within the message to visit a web site or a multi-media channel.

Whereby, the customer uses a convenient, easy way to access web sites or  
20 multimedia channels related to his/her interests, and

Whereby, multimedia and other types of companies can attract consumers standing in checkout lines in retail stores to visit specified web sites and/or multimedia channels at a later time from a standard personal computer or a television set equipped with a set-top box.

25

61. The shopper cart computer subsystem includes a telephone handset that allows:

- ordinary telephone calls,
- dialogue with a service representative accessed through a web site, and

30

- two-way communications with an automatic voice recognition/response system.

Whereby, the customer can make telephone calls from the retail store that may help in making shopping decisions,

5        Whereby, a live sales representative can help a customer in making a shopping decision via telephone, and

          Whereby, an automated system can help a customer in making a shopping decision via telephone.

10      B. Core Business System, shown Fig. 2, is a subset of Fig. 18. The numbering of the functional blocks and the lettering of the data flows below correspond to Fig. 18. Exemplary components of this embodiment can include one or more of the following:

15      8. Fulfillment House Database Server - stores and collates information regarding available inventory of products, shipping and delivery policies, and schedules of the Fulfillment Houses participating in a PUMP marketing network.

20      9. Order Processing Server - feeds order data to the Fulfillment House Database Server and provides raw purchase data for analysis to various databases.

25      10. Merchant Database Server - stores and collates information, analyses and reports on a merchant's business and financial performance.

11. Fulfillment House Extranet - a means of distributing purchase order data to Fulfillment Houses, and getting back information from individual Fulfillment Houses.

12. Merchant Extranet - a means of distributing to a merchant analyses and reports on the merchant's business and financial performance.

13. Local Area Network - connects PUMP components to facilitate data exchange.

30      14. Merchant Fax - sends standard fax reports to individual retail stores.

16. Retail Merchant Electronic Terminal - a standard credit-card-type of terminal (e.g., Verifone, Hypercom, Lipman Nurit terminal), with ports for a standard printer and standard barcode scanner.
19. Standard Printer - attached to the standard credit card terminal. It can print sales receipts, including purchase total and an identification bar code (e.g., type of product purchased, purchase amount, etc.). It can also print a promotional message.
20. Standard Barcode Scanner - attached to the standard credit card terminal. It can read barcodes printed on sales receipts. A repeat customer that returns to the store to make a replenishing purchase can also use the barcode to identify her account in the case of replenishing a service (e.g., a telephone calling card that still has airtime remaining). The barcode also saves the store clerk time by scanning the barcode, instead of keying in purchase parameters manually to a terminal. PUMP can update a customer's account record by reading the barcode from the customer's previous purchase receipt, and sending the replenishing purchase information to the Fulfillment House.
21. Customer Database Server - stores data such as account and product delivery status. The Customer Database Server also keeps records on individual customer profiles and purchase history. It is fed data by the Order Processing Server.
23. Receipt - serves as a sales receipt and a barcode record containing purchase parameters of a transaction.
24. Promotions - consists of in-store displays and signage advertising in-store electronic sale of commodities.

Exemplary information flows can include one or more of the following:

- q. Shared Information - between LAN and Order Processing Server.
- s. Shared Information - between LAN and Fulfillment House Database Server.

- t. Fulfillment House Database Server Feedback - to Order Processing Server regarding product availability and other information
- u. Fulfillment House Database Server Input - places orders on file to be delivered to Fulfillment Houses via Fulfillment House Extranet.
- 5 v. Customer Database Server Input - account and shipping information that will give customers the status of their purchases. This data flow (in concert with data flows provided to the Customer Database from the LAN) also provides purchase, product, and customer profile information to the Customer Database.
- 10 w. Merchant Database Server Input - information that helps a merchant with account data (e.g., sales volumes per store).
- x. Fulfillment House Feedback - inventory data including product availability, shipping and delivery notices from all the Fulfillment Houses participating in the PUMP distribution network.
- 15 y. Fulfillment House Database Server Output - the orders to be distributed via the Fulfillment House Extranet to the range of Fulfillment Houses participating in the PUMP distribution network.
- z. Shared Information - between LAN and Merchant Database Server..
- aa. Fulfillment House Discreet Orders - placed to individual Fulfillment Houses.
- 20 bb. Fulfillment House Feedback - includes inventory data and discreet purchase approvals (e.g., "Product ordered is in stock and is deliverable").
- cc. Merchant Database Input - specifications regarding account queries of all the participating merchants.
- dd. Merchant Database Server Output - contains accounting reports.
- 25 ee. Individualized Merchant Fax Reports - accounting data to all stores requiring sales information on demand (e.g., shift sales reports).
- ff. Merchant Extranet Output - can optionally contain personalized accounting reports (e.g., "Here is the breakdown of your store sales for the week").
- gg. Merchant Extranet Input - specifications regarding account queries.

- hh. Individualized Merchant Fax Reports - accounting data per store on demand (e.g., shift sales reports).
- jj. Order FeedbackCacknowledgement and go-ahead from the Fulfillment House that the ordered product is in stock and deliverable, in the case where a product or service is ordered from a Fulfillment House. Also, feedback from the Fulfillment House Database regarding product and customer profile information, which can optionally trigger programmed promotions to be printed on the point-of-sale printout (e.g., sales receipt).
- kk. Terminal Orders - comprise orders made by means of the standard electronic credit-card-type of terminal, as well as customer and product identification, that are sent over a telephone connection to the Order Processing Server.
- ll. Electronic Purchase Order Information - customer in a retail store orders a product or service (e.g., cellular phone airtime) electronically via a standard credit card terminal.
- mm. Shared Information - between LAN and Customer Database Server.
- nn. Barcode of Individual Receipt - customer may reorder certain products and services by bringing receipt back to the retail business where the original purchase was made. By scanning the receipt barcode, the retail business can reorder for the customer through the electronic terminal.
- ss. Receipt Printout - customer gets printed sales receipt with sales total, customer personal identification number (PIN), barcode and, optionally, a promotion printed on it.
- tt. Promotions - implies the customer actually sees the signage and displays.
- yy. Product Barcode - store clerk scans in a product's barcode at point of purchase.
- zz. Customer Card BarcodeCstore clerk scans in a Customer Card Barcode at point of purchase. Customer cards include check cashing cards, discount cards, or smart cards.

- C. An example of a merchant and a retail store customer using an in-store electronic sales process is shown in Fig. 3. Components of an exemplary embodiment can include one or more of the following:
- a. The process starts when the customer enters a retail store participating in the electronic sales process.
  - b. The customer notices promotional signage, posters, packaging, or products promoting the standard electronic credit card terminal method of purchasing products and/or services.
  - c. She makes a decision of whether or not to buy one or more of the products and/or services offered through the terminal.
  - d. If she decides not to purchase at that time, her participation in the process ends.
  - e. If she decides to purchase, she makes a selection of what she wants to buy.
  - f. She pays for the product.
  - g. The store cashier takes the money, rings up the sale, and gives the customer a receipt.
  - h. The cashier notices if the product can be ordered using the standard credit-card-type terminal.
  - i. If not, the product can be ordered by means of calling an 800-telephone number. The customer receives the number to call.
  - j. The customer then calls the Fulfillment House to place order.
  - k. Otherwise, the cashier keys the order into the terminal.
  - l. The terminal sends the order telephonically to the Order Processor.
  - m. The Order Processor sends the order data to the appropriate Fulfillment House.
  - n. The Fulfillment House fills order and delivers it to the customer.
  - o. The process ends.

- D. Exemplary PUMP P1 functional blocks and data flows are shown in Fig. 4, which is a subset of Fig. 18. The numbering of the functional blocks and the lettering of the data flows below correspond to Fig. 18. Components of an exemplary embodiment can include one or more of the following:
- 5        1. Web Store Server - hosts the Web Store site, the home page of which, in the P1 version, includes two main windows, a Merchant Window and a Portal Window.
- 10        2. Portal Window - provides a gateway to an Internet portal homepage. The Portal Window provides the customer an array of services, products, and links offered through the portal service.
- 15        5. Merchant Window - offers the viewer products and services for sale as well as information helpful to potential customers.
8. Fulfillment House Database Server - stores and collates information regarding available inventory of products, shipping and delivery policies, and schedules of the Fulfillment Houses participating in the PUMP marketing network. It also stores and provides auxiliary product information.
- 20        9. Order Processing Server - feeds order data to the Fulfillment House Database Server and provides raw purchase data for analysis to the various databases.
- 25        10. Merchant Database Server - stores and collates information, analyses and reports on the merchant's business and financial performance. It can also optionally provide targeted information helpful to the merchant in running his business. The Merchant Database Server keeps records on retailers that sell products either through the store-based terminal, or on the retailers that introduced customers to the Web Store and also sell products by this means. The Order Processing Server feeds data to the Merchant Database Server, which can optionally provide the merchant with sales and product data from the merchant's store.

11. Fulfillment House Extranet -- a means of distributing purchase order data to Fulfillment Houses, and getting back information from individual Fulfillment Houses.
12. Merchant Extranet --a means of distributing to the merchant analyses and reports on the merchant's business and financial performance, as well as getting back information from individual merchants.
13. Local Area Network - connects PUMP components to facilitate data exchange.
14. Merchant Fax - sends standard fax reports to individual retail stores.
15. Web Browser - a standard World Wide Web browser, e.g., Netscape Navigator, Microsoft Internet Explorer, etc.
16. Retail Merchant Electronic Terminal - a standard credit-card-type of terminal (e.g., Verifone, Hypercom, Lipman Nurit terminal), with ports for a standard printer and standard barcode scanner
17. Standard Personal Computer - used by customer to access the Web Store.
18. Display - used by customer to view Web Store information, including windows on the Web Store Home Page.
19. Standard Printer - attached to the standard credit card terminal. It can print sales receipts, including the purchase total, the Web Store URL promotion, and a bar code used to identify (e.g., type of product purchased, purchase amount, etc.). It can also optionally print a promotional message.
20. Standard Barcode Scanner - attached to the credit card terminal. It can read the barcodes printed on sales receipts. A repeat customer that returns to the store to make a replenishing purchase can also use the barcode to identify her account in the case of replenishing a service (e.g., a telephone calling card that still has airtime remaining). The barcode also saves the store clerk time by scanning the barcode, instead of keying in purchase parameters manually to a standard credit

- card terminal. PUMP can optionally update the customer's account record by reading the barcode from the customer's previous purchase receipt, and sending the replenishing purchase information to the Fulfillment House. The standard barcode scanner can also read customer card barcodes to identify customers and can scan product UPC codes to identify what customers are buying.
- 5           21. Customer Database Server - stores data, and reports to the customer on account and product delivery status. The Customer Database Server also keeps records on individual customer profiles and purchase history for both store-based credit card terminal sales, as well as for Web Store-based sales. It is fed data by the Order Processing Server, the Web Store Server, and the Customer Extranet.
- 10          22. Standard Computer Keyboard/Mouse - allows the customer to go to the Web Store URL and make selections.
- 15          23. Receipt - serves as a sales receipt and a barcode record containing purchase parameters of a transaction. It also optionally serves as a mini-billboard to promote the Web Store.
- 20          24. PromotionsB consists of in-store displays and signage advertising the mini-billboard receipt, and optionally, has a promotion of the Web Store and/or in-store electronic credit card terminal sale of commodities.
- 25          25. Customer Extranet - distributes customer information, such as account and product delivery status, to the customer, and accepts customer queries regarding product delivery and account information.
26. SAMIS - Sales And Marketing Information System, as detailed in Fig. 12.

The following are exemplary P1 data flows.

- a. Shared Information - between LAN and Web Store Server.

- n. Merchant Window Output - orders sent to the Order Processing Server.
  - q. Shared Information - between LAN and Order Processing Server.
  - r. Web Store Input/Output from/to the Internet - all viewers that want to order products through the retail reference merchant (i.e., the store where they first learned of the Web Store) or that want to access the portal can visit the Web Store Home Page. When they get there, they see two main windows in the PUMP P1 Web Store version: the Merchant Window and the Portal Window.
- 5
- s. Shared Information - between LAN and Fulfillment House Database Server.
  - t. Fulfillment House Database Server Feedback - to Order Processing Server regarding product availability and other information.
  - u. Fulfillment House Database Server Input - places orders on file to be delivered to Fulfillment Houses via Fulfillment House Extranet.
- 10
- v. Customer Database Server Input - account and shipping information that give customers the statuses of their purchases. This data flow (in concert with data flows provided to the Customer Database from the LAN) also provides purchase, product, and customer profile information to the Customer Database.
- 15
- w. Merchant Database Server Input - information that will help merchant with account data (e.g., sales volumes per store).
  - x. Fulfillment House Feedback - inventory data, including product availability, shipping, and delivery notices from all the Fulfillment Houses participating in the PUMP distribution network.
- 20
- y. Fulfillment House Database Server Output - the orders to be distributed via the Fulfillment House Extranet to the range of Fulfillment Houses participating in the PUMP distribution network.
  - z. Shared Information - between LAN and Merchant Database Server.
- 25

- aa. Fulfillment House Discreet Orders - placed to individual Fulfillment Houses.
- bb. Fulfillment House Feedback - includes inventory data and discreet purchase approvals (e.g., "Product ordered is in stock and is deliverable").
- cc. Merchant Database Input - specifications regarding the marketing interests and account queries of all merchants participating in PUMP marketing.
- dd. Merchant Database Server Output - contains accounting reports and targeted marketing messages for all merchants participating in PUMP marketing.
- ee. Individualized Merchant Fax Reports - accounting data to all stores requiring sales information on demand (e.g., shift sales reports).
- ff. Merchant Extranet Output - can optionally contain personalized accounting reports (e.g., "Here is the breakdown of your store sales for the week"), or targeted marketing messages (e.g., "New technology means cost savings for c-stores").
- gg. Merchant Extranet Input - specifications regarding interests of the merchant (e.g., "Which vendors are offering a good deal on gas pumps right now?"), and which also include account queries.
- hh. Individualized Merchant Fax Reports - accounting data per store on demand (e.g., shift sales reports).
- ii. Individual Customer's Interaction with Internet - she sees the Merchant and Portal Windows, which are customized to her interests to the degree the Web Store knows what her interests are. She can order products from the Merchant Window, or she can access the Portal from the Portal Window.
- jj. Order Feedback -- acknowledgement and go-ahead from the Fulfillment House that the ordered product is in stock and deliverable, in the case where a product or service is ordered from a Fulfillment

- House. Also, feedback from the Fulfillment House Database regarding product and customer profile information, which in turn, optionally triggers programmed promotions to be printed on the point-of-sale printout (e.g., sales receipt).
- 5           kk. Terminal Orders - comprise orders made by means of the electronic credit-card-type of terminal, as well as customer and product identification, which are sent over a telephone connection to the Order Processing Server.
- 10          ll. Electronic Purchase Order Information - customer in a retail store orders a product or service (e.g., cellular phone airtime) electronically via a standard credit-card-type of terminal.
- 15          mm. Shared Information - between LAN and Customer Database Server.
- nn. Barcode of Individual Receipt - customer can reorder certain products and services by bringing receipt back to the retail business where the original purchase was made. By scanning the receipt barcode, the retail business can reorder for the customer through the standard electronic credit-card-type of terminal.
- oo. Customer Database Input - requests from all of the customers regarding account and delivery status information.
- 20          pp. Customer Database Output - responses to all customer queries regarding account and delivery status information.
- qq. Standard Computer Keyboard/Mouse Input - customer can go to Web Store URL and make selections.
- rr. Display Output - customer can view screens and their contents.
- 25          ss. Receipt Printout - customer gets printed sales receipt with sales total, customer personal identification number (PIN), barcode, and optionally, a promotion printed on it.
- tt. Promotions - implies the customer actually sees the signage and displays.

- uu. Customer Information Request - regarding account and delivery status information (e.g., "When is my product arriving?", or "How much airtime is left on my cell phone account?").
  - vv. Individualized Customer Communication - can optionally contain personalized accounting reports (e.g., "Here are how many cellular airtime minutes remaining in your account"), or targeted marketing messages (e.g., "You can now buy paging services at the same store where you get your cellular phone service").
  - ww. Shared Information - between LAN and SAMIS.
  - 10 xx. Retail merchants, sales agents, wholesalers, vendors, Fulfillment Houses, and customers can give and receive information to/from PUMP via SAMIS.
  - yy. Product Barcode - store clerk scans in a product's barcode at point of purchase.
  - 15 zz. Customer Card Barcode — store clerk scans in a Customer Card Barcode at point of purchase. Customer cards include check-cashing cards, discount cards, credit, debit, or smart cards.
- E. An exemplary embodiment for a purchase promotion process of products and services offered for sale in-store electronically is shown in Fig. 5. Optional components comprise one or more of the following:
- a. The customer starts this process by walking into a participating store.
  - b. She can buy any product in the store and receive a sales receipt.
  - c. She can see an advertisement or promotion regarding products and/or services on signage and posters.
  - 25 d. In addition to signage and posters, she can also see an advertisement or promotion regarding products and/or services on the sales receipt.
  - e. The customer makes a choice of whether or not to buy a product or service.
  - f. If not, she exits the Web Store promotion process.

- g. The customer makes a choice of whether or not to buy a product or service online. If she does not purchase online, she can purchase in the retail store.
- 5 h. She makes a decision of whether to replenish the product or service.
  - i. If she decides not to replenish her purchase, she exits the Web Store promotion process.
  - j. Otherwise, she uses the Web Store URL promoted in the store to visit the Web Store.
- 10 F. An exemplary embodiment of a Customer Web Store accessing process is shown in Fig. 6. Optional components comprise one or more of the following:
  - a. The customer goes to the Web Store using the URL learned in the retail store.
  - b. She sees the windows on the Web Store home page screen.
  - c. She makes a decision on whether she is interested in the Merchant Window.
  - d. If yes, she clicks to access the Merchant Window.
  - e. If she is not interested in the Merchant Window, she makes a decision on whether she is interested in the Portal Window.
  - 15 f. If yes, she clicks to access the Portal Window.
  - g. If she is not interested in the Portal Window, she makes a decision on whether she is interested in the Infomediary Window.
  - h. If yes, she clicks to access the Infomediary Window.
  - 20 i. If she is not interested in the Infomediary Window, she exits the process.
- 25 G. An exemplary embodiment for functional blocks and data flows of a Merchant Window are shown in Fig. 7, and works as follows:

1. Web Store Server - hosts the Web Store site, which includes the Merchant Window.
2. Merchant Window - offers the viewer products and services for sale, as well as information helpful to potential customers.
- 5 3. Order Processing Server - feeds order data to the Fulfillment House.
4. Fulfillment House - warehouses and delivers products and/or services to customers.
5. Standard Personal Computer - used by customer to access the Web Store.

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Information flows in Fig. 7 are listed below. Optional components comprise one or more of the following:

- a. Merchant Window Output - order data sent to the Order Processing Server.
- 15 b. Order Processing Server Output - order information sent to the Fulfillment House.
- c. Merchant Window Input /Output from/to the Internet - all viewers that are interested in seeing what is available through the Merchant Window, and who may want to order products.
- 20 d. Fulfillment House delivers product or service to customer.
- e. The customer's standard personal computer accesses the Internet, and sends and receives information to and from the Web Store.
- f. The customer can make choices once she is at the Web Store site.
- g. The Merchant Window outputs information to the customer.

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- H. An exemplary embodiment of a Merchant Window Access Process is shown in Fig. 8. Optional steps comprise one or more of the following:
- a. The Web Store Home Page displays the Merchant Window.
  - b. The viewer decides if she is interested in a product or service for sale.
  - 30 c. If yes, she clicks on the product.

- d. The screen displays product information.
  - e. The viewer decides if she wants to buy the product. If she does not want to buy the product, she can go to a different place on the Web Store web site navigation map.
  - 5 f. If she wants to buy the product, PUMP checks whether or not there is a record on file (either a cookie or a database file) for this customer.
  - g. If there is no record on file, the customer is asked for the identification of the retail store that referred her to the Web Store.
  - 10 h. If she is ready to order the product, she clicks to access a secure ordering screen.
  - i. After inputting the required information to order the product, the customer clicks to submit the order.
  - j. The purchase information is saved in a customer file.
  - k. She decides if she wants to learn more about the product for sale. If not, she can go to a different place on the Web Store web site navigation map.
  - 15 l. If the viewer is interested in learning more about the product for sale, she can click on a topic of interest.
  - m. The screen displays information on the topic of interest. The customer can then go to a different place on the Web Store web site navigation map.
- 20
- I. An exemplary embodiment of a Portal Window Access Process is shown in Fig. 9. Optional steps comprise one or more of the following:
  - a. The Web Store home page screen displays the Portal Window.
  - b. The viewer decides whether or not she is interested in the products shown in the Portal Window.
  - c. If yes, she can click on the product button.
  - d. If not, the viewer decides whether or not she is interested in the services offered in the Portal Window.
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- 30

- e. If yes, she can click on the services button.
  - f. If not, the viewer decides whether or not she is interested in the information offered in the Portal Window.
  - 5 g. If yes, she can click on the information button.
  - h. If not, the viewer decides whether or not she is interested in contests, sweepstakes, or other promotions shown in the Portal Window.
  - i. If yes, she can click on the promotions button.
  - j. If not, the viewer decides whether or not she is interested in chat.
  - k. If yes, she can click on the chat button in the Portal Window.
- 10 Otherwise, she goes to a different place on the Web Store web site navigation map.
- J. An exemplary embodiment of a Merchant Home Web Page interconnectivity is shown in Fig. 10. Optional components comprise one or more of the following:
- 1. Web Store Server - hosts the Web Store site, the home page of which includes the Merchant Window.
  - 2. Merchant Window - offers the viewer products and services for sale, as well as information helpful to potential customers.
  - 20 3. Merchant Web Page Link - offers a cross-link to the Merchant Home Web Page.
  - 4. Merchant Home Web Page - can be developed and hosted by an independent service, but is linked to the Web Store.
  - 5. Standard Personal Computer - used by customer to access the Web Store.

25 Exemplary information flows in Fig. 10 comprise:

- a. The Merchant Window can be cross-linked to the merchant's own web page site.

- b. Web Store Input/Output from/to the Internet - all viewers that are interested in seeing what is available through the Merchant Window and who may want to order products can access the Web Store.
  - c. A web viewer that may visit the merchant's own home web page initially can see and click on the hyperlink connecting to the Web Store
  - d. Individual customer's interaction with Internet - she may go directly to the Web Store, or alternately, she may go to the Merchant's Home Web Page.
  - e. Each customer with a standard personal computer can access the Internet.
  - f. The customer receives information from the standard computer CRT screen.
- K. An exemplary embodiment for functional blocks and data flows for a Portal Window are shown in Fig. 11. Optional components comprise one or more of the following:
- 1. The Web Store Server hosts the Web Store Home Page, which displays the Portal Window.
  - 2. The Portal Window contains links to a Portal Home Page.
  - 3. The Portal Home Page is hosted on an independent server, which can be contracted out to an independent Internet portal company.
  - 4. The customer or web surfer uses a standard personal computer to access the Web Store via the Internet.
- An exemplary set of data flows comprises one or more of the following:
- a. The Portal Window is linked to a Portal Server.
  - b. Web Store Input/Output from/to the Internet - all viewers that want to access the portal window can visit the Web Store home page.

- c. A web viewer can visit the Portal Home Page directly and see the page screens on her standard personal computer, whereupon she can make choices regarding available products, services, and information.
  - d. Individual Customer's Interaction with Internet - she can see the Portal Window as well as the Portal Home Page, each customized to her interests to the degree the Web Store and/or the Portal Server knows what her interests are. She can order products, services or get information once she has accessed the Portal Home Page.
  - e. Each customer with a standard personal computer can access the Internet.
  - f. The customer receives information from the standard computer CRT screen.
- L. An exemplary embodiment for Sales And Marketing Information System (SAMIS) functional blocks and data flows is shown in Fig. 12. Optional components comprise one or more of the following:
- 1. Merchant Database - stores and collates information, analyses, and reports on the merchant's business and financial performance. It can also provide targeted information helpful to the merchant in running his business. The Merchant Database keeps records on the retailers that sell products either through the store-based standard credit-card-type terminal, or on the retailers that introduced customers to the Web Store and sell products by this means. The Order Processing Server feeds data to the Merchant Database Server, which can provide the merchant with sales and product data from the merchant's store.
  - 2. Customer Database Server - stores data and reports to the customer information such as account and product delivery status. The Customer Database Server keeps records on customer purchase parameters and customer profiles for both store-based standard credit-card-type terminal sales, as well as for Web Store-based sales.

3. Vendor Database - stores and collates information, and analyzes and reports to vendors on the vendor's target markets -- the retailers, wholesalers and end consumers.
4. Fulfillment House Database - stores and collates information regarding available inventory of products, shipping, and delivery policies and schedules of the Fulfillment Houses participating in the PUMP Marketing Network. It also stores and provides auxiliary product information.
5. Web Store - shares various pages to allow prospective merchants to experience what PUMP customers experience.
6. Wholesaler DatabaseB stores and collates information, and analyzes and reports to wholesalers on the wholesaler's target markets - the retail merchants.
7. SAMIS Server - hosts the Sales And Marketing Information System web pages.
8. SAMIS Web Pages - designed to attract and assist prospective retail merchants in signing up for PUMP service. It includes support for sales agents.
9. Sales Agent Database - holds training information, as well as private sales account data in order to support sales agents.
10. The Service Rep Standard Personal Computer supports the work of the service representative who assists the various types of PUMP user, as well as prospective retail merchants interested in PUMP.
11. The SAMIS Telephone System connects incoming telephone calls to the service representative.
12. A standard personal computer is used by the prospective retail merchant, the wholesaler, and the vendor, to access SAMIS web pages.
13. A telephone connection to the service representative provides the communication necessary to help PUMP users, as well as prospective users interested in PUMP.

- 5                   14. Telephone Automated Support System (TASS) is an interactive system that provides question and answer support to callers that telephone the SAMIS call center. For example, TASS allows a merchant to telephone a toll-free number and sign up for PUMP service. TASS provides the merchant information by means of pre-recorded voice messages, and optionally has the capability to understand human voice input. The merchant can input information either vocally or by using a touch-tone keypad.
- 10                 15. Sales Agent Extranet - a means of distributing account analyses and reports, as well as product and training information to Sales Agents. Agents can also input sales information.
- 15                 16. A standard personal computer is used by the sales agent to access the Sales Agent Database, as well as to access SAMIS.
- 20                 15 An exemplary set of data flows comprises one or more of the following:
- 25                 a. through i. Various databases, as well as the Web Store, the SAMIS server, and the service rep standard personal computer, are connected to a local area network to permit exchange of information.
- 30                 j. The SAMIS Server inputs product information into a Sales Agent Database.
- k. The Sales Agent Database can provide PUMP statistical information to the inquiring merchant.
- l. The Service Rep Standard Personal Computer provides account, policy, and other types of information to the service representative.
- m. The service representative can input into the Service Rep Standard Personal Computer information that goes to various parts of PUMP.
- n. The service representative talks into the SAMIS Telephone System to communicate with PUMP users.
- o. Various PUMP users talk to the service representative through the SAMIS Telephone System.

- p. SAMIS Web Pages interact with all the viewers that come to the site via the Internet.
  - q. Telephone traffic between the SAMIS Telephone System and incoming callers.
  - 5 r. Access of individual PUMP user's standard personal computers to the Internet.
  - s. Prospective PUMP users can see information from the SAMIS Web Pages.
  - t. Prospective PUMP users can input information into SAMIS.
  - 10 u. and v. PUMP users and prospective users can talk to a service rep via telephone and the SAMIS Telephone System.
  - w. Two-way dialogue between TASS and a PUMP user or a prospective merchant, using also the SAMIS Telephone System and a telephone.
  - x. Sales Agent Database Output - provides the Sales Agent Extranet with account, training, and SAMIS information for all Sales Agents.
  - 15 y. Sales Agent Database Input - provides sales and marketing data from all the Sales Agents in the field.
  - z. Information interchange between Sales Agents standard personal computers and the Sales Agent Extranet.
  - 20 aa. Information requests and sales account information sent to a Sales Agent.
  - bb. Specific information requested by a Sales Agent.
- M. An exemplary embodiment of a Merchant Prospect SAMIS Access Process is shown in Fig. 13. Exemplary steps comprise one or more of the following:
- 25 a. The process starts when a PUMP operator targets the merchants that it wants to recruit, and identifies appropriate media to use to communicate with the merchants.
  - b. A PUMP operator advertises PUMP service.

- c. A retail merchant prospect sees one of the ads, which contains the SAMIS URL web address.
  - d. The merchant visits the SAMIS Web Site to learn more.
  - e. She makes a decision regarding whether or not to order PUMP service.
  - 5 f. If not, she exits the process.
  - g. If she chooses to order PUMP service, she decides whether or not she wants to talk to a live person.
  - h. If not, she clicks on the automated sign-up service.
  - i. If she wants to talk to a live person, she decides whether or not she wants a sales call from a sales agent.
  - 10 j. If yes, SAMIS sends a message to a sales agent.
  - k. If not, the customer can telephone a service representative at the SAMIS call service center.
  - l. In this case, the service rep assists the merchant in signing up for PUMP service.
  - 15 m. The access process is completed with the successful initiation of service operation.
- N. An exemplary embodiment of an Automated Merchant Sign-up Process is shown in Fig. 14. Exemplary steps comprise one or more of the following:
- a. The applicant fills out a form indicating all information technically needed to set up the merchant's store with the service.
  - b. An optional additional form assists the PUMP operator in tracking demographic marketing data regarding the store and its customers, and helps in analyzing the types and quantities of products sold through PUMP referencing the store.
  - 25 c. The merchant can choose from possible service profiles and levels available through PUMP.
  - d. The merchant inputs financial data that are necessary for the enablement of initiation of service.
- 30

- e. The applicant clicks to submit the application.
  - f. The merchant applicant checks to determine if the store needs new equipment.
  - 5 g. If a new standard credit-card-type of terminal is needed, the merchant applicant indicates so to the PUMP operator. The PUMP operator then programs an appropriate standard credit-card-type terminal for the merchant.
  - h. The new equipment is delivered to the merchant.
  - i. The new equipment is installed in the merchant's store.
  - 10 j. If an existing standard credit-card-type terminal in the store can be used, the merchant follows a programming procedure and setup procedure (see Fig. 15).
  - k. The merchant signup process is completed and the store can begin PUMP operation.
- 15
- O. An exemplary embodiment of an Existing Terminal Programming Procedure is shown in Fig. 15. Exemplary steps comprise one or more of the following:
    - a. The process starts with the determination by the merchant that a new standard credit-card-type of terminal is not required to use the PUMP service.
    - b. The merchant notes the type of terminal [for example, Verifone Tranz models (e.g., 330, 380, 420, 460, 470), Hypercom models (e.g., TP7, T5000), CardService models (e.g., LinkPack 350), Lipman models (e.g., Nurit 2080, 2085)] already in use in the store where she wishes to begin PUMP service.
    - c. The merchant pulls up programming instructions for that terminal type on a SAMIS screen.
    - d. The merchant checks if an Internet-enabled standard computer is available that can be used at the checkout counter where the standard credit-card-type terminal operates.
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- e. If yes, the merchant can go to a SAMIS signup page in order to input information needed to program the standard credit-card-type of terminal.
  - f. He fills out the forms on the signup page.
  - 5 g. If no standard computer is available at the point of sale, SAMIS can make available instruction pages based on information the merchant has input. The merchant fills out a printed-out paper form, which includes inputting the terminal type into a SAMIS information page.
  - h. The merchant takes the instructions to the physical location where the in-store terminal is operating. Either a standard wireless or standard wireline telephone must be available.
  - 10 i. He calls the SAMIS Telephone Automated Signup System (TASS) on the telephone and inputs the store ID.
  - j. The merchant follows instructions and, interacting with TASS, inputs sufficient data into the telephone to allow PUMP to program the terminal.
  - 15 k. The procedure ends with the successful programming of the terminal performed automatically by PUMP via telephone connection.
- 20 P. An exemplary embodiment for expansion of PUMP to new industries is shown in Fig. 16. The expansion process includes identification of, and expansion into, new markets. Exemplary new markets can comprise one or more of the following commercial categories:
- |    |                    |    |                          |
|----|--------------------|----|--------------------------|
| 25 | • Animal hospitals | 30 | • Audio-visual equipment |
|    | • Antiques         |    | • Automobiles            |
|    | • Appliance        |    | • Beauty                 |
|    | • Aquariums        |    | • Bedding                |
|    | • Art Galleries    |    | • Beepers                |

- Blinds
- Boats
- Building Supplies
- Brides
- 5 • Camping equipment
- Carpeting
- Cellular phones
- Child care service
- Church Supplies
- 10 • Cleaners
- Clothing
- Collectibles
- Computers
- Convenience store
- 15 • Cosmetic products
- Cosmetic services
- Delicatessens
- Dentists
- 45 • Discount stores
- Dolls and accessories
- Drugstores
- Electric equipment
- Electronic devices
- 20 • Embossing
- Factory outlets
- Fertilizers
- Financing
- 50 • First aid supplies
- Food and beverage
- 30 • Fuel
- Funeral
- Furniture
- Games
- Garden centers
- 35 • Gas equipment
- Gems
- Gift shops
- Golf products
- Golf services
- 40 • Grocery stores
- Guns
- Hair products
- Hair services
- Hardware
- 45 • Health clubs
- Hearing aids
- Herbs
- Hobby and model shops
- Home furnishings
- 50 • Home improvements
- Hotels and motels
- Housing
- Housewares
- 25 • Insurance
- Investment securities
- 55 •

- Iron work
- Jewelers
- Kennels
- Keys
- 5 • Kitchen cabinets
- Kitchen equipment
- Lamps and shades
- Laundries
- Legal clinics
- 10 • Lighting products
- Liquor stores
- Luggage
- Lumber
- Magazines
- 15 • Maps
- Marinas
- Meat
- Mobile homes
- Money order service
- 20 • Motor homes
- Motors
- Musical instruments
- Nail salons and services
- Nanny service
- 25 • Newspapers
- Nurseries for plants, trees, etc.
- Nursing homes
- Office furniture and equipment
- Office supplies
- Oil products
- Opticians
- Optical supplies
- Outplacement services
- Paint and paint supplies
- Paper products
- Party supplies
- Pawnbrokers
- Pet supplies
- Photographic products and services
- Physical therapy products and services
- Picture frames
- Pizzas
- Plants
- Pottery
- Printers
- Psychologists
- Race tracks
- Real estate
- Resorts
- Restaurants
- Sales training
- Sandwiches
- Schools
- School supplies

- Seafood
  - Security products and services 15 • Toys
  - Shipping
  - Signs
  - 5 • Sod and sodding service • Trailers
  - Sporting Goods
  - Sound products and services 20 • Uniforms
  - Sports products and services • Variety stores
  - Stock and bond brokers • Veterinary products and services
  - 10 • Stone products • Vehicles
  - Tanning salons • Video products and services
  - Tires 25 • Vitamins and food supplements
  - Tools • Watches
  - Weddings
  - Wheelchairs
  - Windows
- Q. An exemplary PUMP PX Market Development Scenario is shown in Fig. 17. Exemplary steps comprise one or more of the following:
- 30 a. The PUMP operator makes a business decision that the time is right to expand PUMP P1.
  - b. The PUMP operator chooses a new market to enter, based on established criteria (e.g., Is it a sector of the retail economy that could particularly benefit from greater levels of customer permission?).
  - 35 c. Interviews with merchants establish guidelines for entering the new market.
  - d. Market testing with customers in the chosen market reveals what profiles of products and information sets that are the most appealing to offer in the Merchant Window.
  - 40 e. The PUMP operator recruits one or more Fulfillment Houses to provide products and their delivery to customers.

- f. The PUMP operator recruits publishers and/or other content providers to obtain information profiles needed.
  - g. The Fulfillment House Database is loaded with product and auxiliary information relating to the customers in that market.
  - 5 h. The hardware and software of PUMP is scaled up to meet anticipated traffic volume that the new market will bring.
  - i. The PUMP operator starts recruiting retail merchants in the new market.
  - j. Recruiting continues until the market reaches a point approaching or reaching consolidation.
  - 10 k. The PUMP operator decides whether or not to expand into yet another new market. If yes, the process goes back to b. above.
  - l. Otherwise, the PUMP PX phase of the lifecycle ends.
- 15 R. Infomediary functional blocks and data flows for an exemplary embodiment are shown in Fig. 18. Exemplary components comprise one or more of the following:
- 1. Web Store Server - hosts the Web Store site, the home page of which, in the PUMP PM version, include three main windows: the Merchant Window, the Portal Window, and the Infomediary Window.
  - 20 2. Portal Window - provides a gateway to an Internet portal homepage. The Portal Window provides to the customer an array of services, products, and links offered through the portal service.
  - 3. Vendor Extranet - a means of distributing to vendors analyses and reports on the vendor's target markets - the retailers, wholesalers, and end consumers.
  - 25 4. Wholesaler Extranet - a means of distributing to wholesalers analyses and reports on the wholesaler's target markets - the retail merchants.
  - 5. Merchant Window - offers the viewer products and services for sale as well as information helpful to potential customers.
- 30

6. Vender Database Server - stores and collates information, analyses, and reports to vendors on the vendor's target markets - the retailers, wholesalers, and end consumers.
7. Wholesaler Database Server - stores and collates information, analyses and reports to wholesalers on the wholesaler's target markets - the retail merchants.
8. Fulfillment House Database Server - stores and collates information regarding available inventory of products, shipping and delivery policies, and schedules of the Fulfillment Houses participating in the PUMP marketing network. Also, it stores and provides auxiliary product information.
9. Order Processing Server - feeds order data to the Fulfillment House Database Server and provides raw purchase data for analysis to the various databases.
10. Merchant Database Server - stores and collates information, analyses, and reports on the merchant's business and financial performance. It can also optionally provide targeted information helpful to the merchant in running his business. The Merchant Database Server keeps records on retailers that sell products either through the store-based terminal, or on the retailers that introduced customers to the Web Store and also sell products by this means. The Order Processing Server feeds data to the Merchant Database Server, which can optionally provide the merchant with sales and product data from the merchant's store.
11. Fulfillment House Extranet - a means of distributing purchase order data to Fulfillment Houses, and getting back information from individual Fulfillment Houses.
12. Merchant Extranet - a means of distributing to the merchant analyses and reports on the merchant's business and financial performance, and getting back information from individual merchants.

13. Local Area Network - connects PUMP components to facilitate data exchange.
14. Merchant Fax - sends standard fax reports to individual retail stores.
15. Web Browser - a standard World Wide Web browser, e.g., Netscape Navigator, Microsoft Internet Explorer, etc.
- 5 16. Retail Merchant Electronic Terminal - a standard credit-card-type of terminal (e.g., Verifone, Hypercom, Lipman Nurit terminal), with ports for a standard printer and standard barcode scanner.
- 10 17. Standard Personal Computer - used by customer to access the Web Store.
18. Standard CRT Display - used by customer to view Web Store information, including windows on the Web Store Home Page.
19. Standard Printer - attached to the standard credit card terminal. It can print sales receipts, including the purchase total, the Web Store URL promotion, and a bar code used to identify (e.g., type of product purchased, purchase amount, etc.). It can also print a promotional message.
- 15 20. Standard Barcode Scanner - attached to the standard credit card terminal. It can read the barcode printed on sales receipts. A repeat customer that returns to the store to make a replenishing purchase can also use the barcode to identify her account in the case of replenishing a service (e.g., a telephone calling card that still has airtime remaining). The barcode also saves the store clerk time by scanning the barcode instead of keying in purchase parameters manually to a standard credit card terminal. PUMP can update the customer's account record by reading the barcode from the customer's previous purchase receipt, and sending the replenishing purchase information to the Fulfillment House. The standard barcode scanner can also read customer card barcodes to identify customers and can scan product UPC codes to identify what customers are buying.
- 20
- 25
- 30

- 5                    21. Customer Database Server - stores data, and reports to the customer on account and product delivery status. The Customer Database Server also keeps records on individual customer profiles, and purchase history for both store-based terminal sales, as well as for Web Store-based sales. It is fed data by the Order Processing Server, the Web Store Server, and the Customer Extranet.
- 10                  22. Standard Computer Keyboard/Mouse - allows the customer to go to the Web Store URL and make selections.
- 15                  23. Receipt - serves as a sales receipt and a barcode record containing purchase parameters of a transaction. It also serves as a mini-billboard to promote the Web Store.
- 20                  24. Promotions - consists of in-store displays and signage advertising the mini-billboard receipt, and optionally, has a promotion of the Web Store and/or in-store electronic standard credit-card-type of terminal sale of commodities.
- 25                  25. Customer Extranet - distributes customer information, such as account and product delivery status, to the customer, and accepts customer queries regarding product delivery and account information.
26. SAMIS - Sales And Marketing Information System, as detailed in Fig. 12.
27. Infomediary Window - provides the interface to the customer to obtain the products, services, and information from retail merchants, wholesalers, and manufacturers participating in the Infomediary business.
- Exemplary information flows in Fig. 18 comprise one or more of the following:
- a. Shared Information - between LAN and Web Store Server.
- b. Vendor Extranet Output - information targeted to a specific vendor who has requested customized market data (e.g., "Here is the report

- you requested on how many new convenience stores are opening in  
the next six months within 100 miles of your distribution location" ).
- c. Vendor Extranet Input - specifications regarding the interests of the vendor (e.g., "I want to sell to the convenience store industry according to certain product categories, constraints, and requirements" ).
  - d. Shared Information - between LAN and Vendor Database Server.
  - e. Wholesaler Extranet Output - information to a specific wholesaler who has requested customized market data (e.g., "Here is the report you requested on stores in your market that have over 1200 square feet" ).
  - f. Wholesaler Extranet Input - specifications regarding the interests of the wholesaler (e.g., "How many stores in our market are in your records in Florida with over 1200 sq. ft.?" ).
  - i. Vendor Database Server Output - information available to all of the vendors subscribing to the PUMP customized marketing data service.
  - j. Vendor Database Server Input -- the range of specifications regarding the marketing interests of all the vendors subscribing to the PUMP customized marketing data service.
  - k. Wholesaler Database Server Output - information available to all of the wholesalers subscribing to the PUMP customized marketing data service.
  - l. Wholesaler Database Server Input - the range of specifications regarding the marketing interests of all the wholesalers subscribing to the PUMP customized marketing data service.
  - m. Shared Information - between LAN and Wholesaler Database Server.
  - n. Merchant Window Output - orders sent to the Order Processing Server.
  - o. Vendor Database Input - permissible shared information that will help a vendor target markets.

- p. Wholesaler Database Input - permissible shared information that will help a wholesaler target markets.
  - q. Shared Information - between LAN and Order Processing Server.
  - r. Web Store Input/Output from/to the Internet - all viewers that want to order products through the retail reference merchant (i.e., the store where they first learned of the Web Store) can visit the Merchant Window, that want to access the Portal Window can visit the Web Store Home Page, and that want to use the Infomediary service can visit the Infomediary Window.
- 5
- s. Shared Information - between LAN and Fulfillment House Database Server.
  - t. Fulfillment House Database Server Feedback - to Order Processing Server regarding product availability and other information.
  - u. Fulfillment House Database Server Input - places orders on file to be delivered to Fulfillment Houses via Fulfillment House Extranet.
- 10
- v. Customer Database Server Input - account and shipping information that gives customers the statuses of their purchases. This data flow (in concert with data flows provided to the Customer Database from the LAN) also provides purchase, product, and customer profile information to the Customer Database.
- 15
- w. Merchant Database Server Input - information that helps merchants with account data (e.g., sales volumes per store).
  - x. Fulfillment House Feedback - inventory data, including product availability, shipping and delivery notices from all the Fulfillment Houses participating in the PUMP distribution network.
- 20
- y. Fulfillment House Database Server Output - the orders to be distributed via the Fulfillment House Extranet to the range of Fulfillment Houses participating in the PUMP distribution network.
  - z. Shared Information - between LAN and Merchant Database Server.
- 25

- aa. Fulfillment House Discreet Orders - placed to individual Fulfillment Houses.
- bb. Fulfillment House Feedback - includes inventory data and discreet purchase approvals (e.g., "Product ordered is in stock and is deliverable").
- cc. Merchant Database Input - specifications regarding the marketing interests and account queries of all the merchants participating in PUMP marketing.
- dd. Merchant Database Server Output - contains accounting reports and targeted marketing messages for all the merchants participating in PUMP marketing.
- ee. Individualized Merchant Fax Reports - accounting data to all stores requiring sales information on demand (e.g., shift sales reports).
- ff. Merchant Extranet Output - can optionally contain personalized accounting reports (e.g., "Here is the breakdown of your store sales for the week"), or targeted marketing messages (e.g., "New technology means cost savings for c-stores").
- gg. Merchant Extranet Input - specifications regarding the interests of the merchant (e.g., "Which vendors are offering a good deal on gas pumps right now?"), and which also include account queries.
- hh. Individualized Merchant Fax Reports - accounting data per store on demand (e.g., shift sales reports).
- ii. Individual Customer's Interaction with Internet - she sees the Merchant, the Portal, and the Infomediary Windows, customized to her interests to the degree the Web Store knows what her interests are. She can order products from the Merchant Window or she can access the Portal Home Page from the Portal Window. She can also access Infomediary service through the Infomediary Window.
- jj. Order Feedback -- acknowledgement and go-ahead from the Fulfillment House that the ordered product is in stock and deliverable,

- in the case where a product or service is ordered from a Fulfillment House. Also, feedback from the Fulfillment House Database regarding product and customer profile information, which can, in turn, optionally trigger programmed promotions to be printed on the point-of-sale printout (e.g., sales receipt).
- 5           kk. Terminal Orders - comprise orders made by means of the standard electronic credit-card-type of terminal, as well as customer and product identification, which are sent over a telephone connection to the Order Processing Server.
- 10          ll. Electronic Purchase Order Information - customer in a retail store orders a product or service (e.g., cellular phone airtime) electronically via a standard credit-card-type of terminal.
- mm. Shared Information - between LAN and Customer Database Server.
- 15          nn. Barcode of Individual Receipt - customer may reorder certain products and services by bringing receipt back to the retail business where the original purchase was made. By scanning the receipt barcode, the retail business can reorder for the customer through the electronic standard credit-card-type of terminal.
- oo. Customer Database Input - requests from all of the customers regarding account and delivery status information.
- 20          pp. Customer Database Output - responses to all customer queries regarding account and delivery status information.
- qq. Standard Computer Keyboard/Mouse Input - customer can go to Web Store URL and make selections.
- 25          rr. Display Output - customer can view screens and their contents.
- ss. Receipt Printout - customer gets printed sales receipt with sales total, customer personal identification number (PIN), barcode, and, optionally, a promotion printed on it.
- tt. Promotions - implies the customer actually sees the signage and displays.
- 30

- uu. Customer Information Request - regarding account and delivery status information (e.g., "When is my product arriving?", or "How much airtime is left on my cell phone account?").
  - vv. Individualized Customer Communication - can contain personalized accounting reports (e.g., "Here are how many cellular airtime minutes remaining in your account"), or targeted marketing messages (e.g., "You can now buy paging services at the same store where you get your cellular phone service").
  - ww. Shared Information - between LAN and SAMIS.
  - xx. Retail merchants, sales agents, wholesalers, vendors, Fulfillment Houses, and customers can give and receive information to/from PUMP via SAMIS.
  - yy. Product Barcode - store clerk scans in a product's barcode at point of purchase.
  - zz. Customer Card Barcode -- store clerk scans in a Customer Card Barcode at point of purchase. Customer Cards include check-cashing cards, discount cards, credit, debit, and smart cards.
- S. An exemplary embodiment of a PUMP Users Service Center process is shown in Fig. 19. Exemplary steps comprise one or more of the following:
- a. The process starts when a PUMP user needing assistance decides to contact the SAMIS Service Center.
  - b. A telephone number (toll-free or otherwise) is provided that PUMP users can call to get service.
  - c. The service rep responds to questions from a PUMP user.
  - d. Alternatively, the PUMP users can logon to an appropriate Extranet to obtain information.
  - e. The online user or the service representative can access all available information.
  - f. The user decides whether or not to access her account.

- g. If not, she exits the process.
  - h. If yes, the system requires identification.
  - i. The user or the service representative then can pull up the account information.
  - 5 j. The process ends after the user has successfully obtained all needed information.
- T. An exemplary embodiment of an ordering process is shown in Fig. 20. Exemplary steps comprise one or more of the following:
- 10 a. The process begins when a customer (either in-store or online) submits an order.
  - b. The Order Processing Server (OPS) receives an order, either from the Web Store or from an individual retail store standard credit card terminal.
  - 15 c. The OPS checks the order for validity and availability.
  - d. If the check fails, the OPS send a negative acknowledgement to the order-originating standard credit-card-type of terminal.
  - e. The process is then terminated.
  - f. The order information is distributed to various databases.
- 20 g. The OPS sends the order to a Fulfillment House.
- h. The Fulfillment House receives the order, fills the order, and delivers it to the customer.
  - i. The Fulfillment House Database is updated with the purchase information.
- 25 j. The process ends after the Fulfillment House has carried out its obligations, and PUMP has updated one or more databases.
- U. An exemplary embodiment for implementing PUMP through its life cycle is shown in Fig. 21. Exemplary steps comprise one or more of the following:

- a. The start of this process involves designing the life cycle phases of PUMP.
  - b. The first step is to test the Core Business System (CBS) and deploy it when testing is complete.
  - 5 c. The next stage involves the design, prototyping, and testing of the Web Store.
  - d. SAMIS is then designed, prototyped, and tested.
  - e. PUMP is scaled up as performance requirements increase over time.
  - f. The PUMP operator opens new markets.
  - 10 g. Finally, PUMP evolves into an Information Intermediary and operates indefinitely.
- V. An exemplary embodiment for an Infomediary Business Building Process is shown in Fig. 22. Exemplary components comprise one or more of the following:
- a. The preliminary lifecycle phases of CBS, P1, and PX precede the implementation of a full service Infomediary.
  - b. A PUMP operator builds the first stage of Customer Profile.
  - c. A critical mass of customers is accumulated.
  - 15 d. The PUMP operator builds the second stage of Customer Profile.
  - e. Vendors are recruited that desire to market to the customer base.
  - f. The PUMP operator establishes profile criteria.
  - 20 g. The profiles are used to create value for PUMP users.
- 25 W. An exemplary embodiment of a PUMP Customer Relationship Management (CRM) Process is shown in Fig. 23. Exemplary components comprise one or more of the following:
- a. The process starts by creating a desire or need in the customer's mind for what a retail store offers.

- b. The retail store attracts the customer by means of advertising, promotions, and/or location of the store.
  - c. The customer picks a product to buy and initiates the purchase by approaching the checkout and paying for the product.
  - 5 d. The store invokes the POS magnetizing process by employing PUMP.
  - e. The CRM process ends when the customer becomes an ex-customer and no longer shops at the retail store or visits the Web Store.
- X. An exemplary embodiment of a Magnetizing Process used on PUMP is shown in Fig. 24. Exemplary steps comprise one or more of the following:
- a. The process begins when a customer in a store initiates a product purchase.
  - b. Check if the store uses a scanning system. If not, go directly to check for the store's profile.
  - 10 c. If the store does use a scanning system, check if the store accepts a PUMP-recognized Customer Card. If not, go to check if the customer has presented a receipt that needs scanning.
  - d. If yes, scan the Customer Card to get customer information.
  - e. Check to see if customer has presented a receipt to be scanned for a product or service refill or renewal.
  - 15 f. If yes, scan the receipt.
  - g. The merchant scans the bar codes of the products purchased.
  - h. Check one or more databases for product, store, and customer profiles.
  - 20 i. Suitable rules are chosen based on criteria, which maximize the chances for a positive response from the customer. The rules are, for example, based on either the present products being purchased, on knowledge about the customer, on the season (e.g., "Less than a month before Christmas." ), or on the store profile (e.g., a pet store

- rule is: "Since we know the customer owns a pet, the promotion includes a prize for the pet".
- 5           j. Choose an advertisement or promotion to be printed on a receipt or printout based on suitable criteria. For example, if beer is being bought, the promotion includes: "Go to www.ourWebStore.com for a chance to win free beer for every weekend of the year!" ), or the message is based on a customer record in a PUMP database (e.g., Since we know the customer just bought a new house, the promotion includes: "For Great Prices For HOME FURNISHINGS, Visit www.ourWebStore.com."
- 10          k. The advertisement or promotion is printed on the sales receipt or other printout and given to the customer.
- l. The customer who is attracted by the promotion visits the Web Store.
- m. The Web Store makes an offer of a benefit to the customer.
- 15          n. The customer has the option of accepting the offered benefit.
- o. If the customer decides against accepting the offered benefit, the process ends.
- p. If the customer accepts the offer, she must provide personal information (e.g., name and mailing address, or email address) to receive it.
- 20          q. When the benefit is delivered, it comes including other, additional offers of still more benefits.
- r. Once again, the customer has the option of accepting the offered, additional benefits.
- s. If the customer decides against accepting the new offerings, the process ends.
- 25          t. If the customer accepts one or more of the new offerings, she is either asked to verify existing profile information (e.g., her name and mailing address) or, in addition, she is asked to provide preference information (e.g., "What color, size, and style of picture frames do you prefer?").

- u. Again, when the new benefits are delivered, they come including other, additional offers of still more benefits.
- Y. An exemplary embodiment of a process to build a product-rebate coupon on PUMP is shown in Fig. 25. Exemplary steps comprise one or more of the following:
- a. The process begins when person sees any type of advertisement or promotion, including an email or a hyper link or a banner advertisement on a web site, for an online coupon.
  - b. The viewer can click on the link to visit the coupon site.
  - c. The viewer is asked to input her Local Postal Code to identify a local participating store that accepts PUMP coupons.
  - d. At the coupon site, the viewer sees a list of products or services that are available for rebates.
  - e. The viewer can select one or more products or services that will appear on the coupon. The viewer hits a submit button, which, in addition to the generation of the coupon, triggers profile-based rules for generating offers of benefits to the viewer on the screen.
  - f. After submission of all products desired for inclusion on the coupon, the viewer can see on the screen what the coupon will look like before it is printed. The viewer also sees additional offers on the screen, which allow the viewer more options to pursue, which, if followed, allow PUMP the opportunity to collect more data on the viewer and potentially lead to more sales to the viewer.
  - g. The viewer decides if the coupon is the way she wants it. If yes, she may print the coupon. If not, she may return to edit the coupon.
  - h. The viewer can print the coupon formatted with selected products. Also, optionally on the printout are one or more promotions based on profiles and rules.

- i. The viewer can take the coupon to a participating store to use to receive rebates on selected products.
  - j. The process ends when the customer uses her coupon in the store.
- 5    Z. An exemplary embodiment for a procedure for a PUMP user to subscribe to an email notification service is shown in Fig. 26. Exemplary steps can comprise one or more of the following:
- a. The process begins when the PUMP operator publishes (either online or offline) an advertisement or promotion which is seen by one or more consumers that is related to an email notification service.
  - b. A consumer subscribes to the service and receives an email notification from the service which contains an offer for a benefit.
  - c. She may click to accept the offer; otherwise, the process ends.
  - d. If she accepts, she is asked what kind of notice she would like (e.g., product rebates, financial events, or topical news) and when she would like to receive it.
  - e. Thereafter, she will receive the specified types of notice according to a specified schedule (periodic or not).
  - f. Then, for instance, whenever an email notice arrives, the viewer decides whether or not she is interested in the offer of the notice.
  - 10    g. If the viewer is not interested, the process ends.
  - h. If she is interested, she can go to the web site where the offer is available.
  - i. If, after investigation, the offer seems attractive, the viewer can accept the offer.
  - 15    j. In order to receive the offered benefit, the viewer must specify delivery information (e.g., who to send it to, where to send it, how to send it) and what options the receiver wants (e.g., color, type, model, etc.).
  - k. She receives the benefit.
  - 20    l. Either way, the process ends.

AA. An exemplary embodiment of an Infomediary System is shown in Fig. 27. An exemplary embodiment can comprise one or more of the following components:

- 5        1. Infomediary Operations Center - the location where people and equipment run the PUMP operations.
2. Standard Personal Computers - used for connecting PUMP users to the Infomediary Operations Center via the Internet or an Extranet.
3. Telephone System - operated by the Telephone Company to allow PUMP users to communicate telephonically with PUMP.

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Exemplary data flows can comprise one or more of the following:

- a. Data traffic between PUMP users on a password-accessible Extranet and the PUMP Infomediary Operations Center.
- 15        b. Data traffic between customers and merchant prospects using public access Internet and the PUMP Infomediary Operations Center.
- c. Telephone traffic to and from the Infomediary Operations Center.
- d. Data traffic between the standard computers of customers and merchant prospects using public access Internet and the PUMP Infomediary Operations Center.
- 20        e. PUMP-related information exchanged between users and their standard personal computers.
- f. Talking over the Telephone System between PUMP users and service representatives.
- 25        g. Data traffic between the standard personal computers of PUMP users using one or more password-accessible Extranets and the PUMP Infomediary Operations Center.

- BB. An exemplary embodiment of a Web Store Home Page is shown in Fig. 28, and can comprise one or more of the following components:

1. Merchant Window - offers products and/or services for sale, as well as information that can be accessed.
  2. Portal Window - offers the services of an Internet portal company, which can be licensed to use screen space on the Web Store.
  - 5 3. Infomediary Window - offers commodities and information to customers based on (e.g., store, manufacturer, product, event, region, religious, ethnic, and customer) rules and profiles.
- CC. An exemplary embodiment of an Internet Portal Company Home Page is shown in Fig. 29. Exemplary embodiments can comprise one or more of the following:
1. Local or regional versions of the Home Page that offer commodities and information that are available locally or regionally (e.g., "Sale on automobile batteries at Al's Auto Parts in Homewood, Alabama", or "Click here for the latest news on the North Alabama White Water Canoe Society").
  2. National or international components of the Home Page can offer commodities and information that are independent of locality or region.
- DD. An exemplary embodiment of a Customer Profile Building Process is shown in Fig. 30 and can comprise one or more of the following components:
- a. The process starts when a customer begins to use a PUMP service.
  - b. The customer subscribes to a PUMP email notification service and gives her interest profile (e.g., "I want to be notified about NFL sporting events, gardening tips, and online coupon rebates in the following areas: groceries, clothing, office supplies, and sporting goods"). She also supplies her email address.
  - c. The customer receives email notification matching her specifications.
- 30 An email notification can contain the content information requested by

- the customer (e.g., "The Vikings beat the Packers in today's game") or can optionally point or link to a specific web site (e.g., A- Click [here](#) or go to [www.yoursportsinfo.com](http://www.yoursportsinfo.com) to get your personalized sports update.
- Click [here](#) or go to [www.yourgarden.com](http://www.yourgarden.com) for your personalized gardening tips.
  - Click [here](#) or go to [www.yourgrocerycoupon.com](http://www.yourgrocerycoupon.com) for your personalized grocery coupon.
  - Click [here](#) or go to [www.yourclothingcoupon.com](http://www.yourclothingcoupon.com) for your personalized clothing coupon.
  - Click [here](#) or go to [www.yourofficesupplycoupon.com](http://www.yourofficesupplycoupon.com) for your personalized office supplies coupon.
  - Click [here](#) or go to [www.yoursportinggoodscoupon.com](http://www.yoursportinggoodscoupon.com) for your personalized sporting goods coupon." ) Emails optionally provide hyper links to indicated web sites.
- 15           d. The customer can visit a coupon-building web site and select items that she would like to receive a rebate or a discount on at the time of purchase. In making her selections, her behavior can identify her wants, needs, desires, tastes, wishes, and/or preferences of commodities. This information is recorded in the customer profile file or record.
- 20           e. The customer takes her coupon to a retail store to be redeemed.
- f. The customer has an option to pay with a generic plastic (e.g., credit, Electronic Benefits Transfer, debit, discount, check cashing, or smart) card with a magnetic strip or other means of recording customer data.
- 25           g. If so, information (e.g., customer name, card identification number, etc.) from the magnetic strip or other means on the card is taken and input into PUMP.
- h. The customer has an option to use an additional card (e.g., credit, debit, discount, check cashing, or smart) that uses barcode scanning, a

magnetic strip, and/or other information storage means. This customer card is optionally a private label card that is a mini-billboard that promotes a business or a commodity.

- i. The customer has the option to apply, either online or offline, for a customer card.
- j. If desired, the customer fills out a customer card application form and submits it. Information from the application can be added to the customer profile.
- k. If the customer has a customer card, she can optionally allow it to be barcode scanned or magnetically swiped at the store checkout. In this case, the customer is identified and the customer's purchase behavior is linked to all the information in the customer's profile record.
- 10 l. If the customer has purchased a commodity (e.g., cellular airtime) in the past that provided a barcoded receipt, she may submit the receipt to be scanned in order to make a replenishing purchase of her cellular airtime account. The advantage of the barcoded receipt is it identifies the customer account and saves time in keying the account number into the standard credit-card-type of terminal.
- 15 m. The store clerk scans the receipt barcode.
- n. The clerk sends the replenishing purchase order to the remote Order Processing Server (OPS) from the terminal by calling up a product menu on the terminal display and hitting the submit order key. PUMP adds the purchase record to the purchase history information in the customer profile.
- 20 o. The store clerk scans the UPC barcode of each product purchased. This also provides a purchase record which is added to the purchase history information that is recorded in the customer profile.
- p. The customer exits the store and visits a PUMP web site (either the Web Store or a Customer Extranet account page). PUMP collects a

- record of the customer's click flow (i.e., what the customer clicks on at the site).
- q. The customer accepts one or more benefits offered. To receive a benefit, the customer must provide both delivery information (e.g., her name and shipping address) as well as commodity option preferences (e.g., "I want the Super Widget, Model A1, size 3, in red"). This information can update the customer profile.
- 5 r. The customer has a choice of optionally recycling through some if not all of the steps above. If so, she has the opportunity to modify, broaden, deepen, and/or upgrade the information in her PUMP customer profile.
- 10 s. If not, she can optionally not participate in any PUMP services.
- EE. An exemplary embodiment of a Profile Building Process of PUMP Business  
15 Users is shown in Fig. 31 and can comprise one or more of the following components:
- a. The process begins when the PUMP operator chooses one or more industrial categories to target.
- b. The PUMP operator runs advertisements or promotions (e.g., in newspapers, trade magazines, etc.) to recruit PUMP business users.
- 20 c. The advertisement or promotion respondents visit SAMIS to find out about PUMP benefits. The PUMP operator gathers information from the click flow (i.e., the pages, icons, and hyperlinks clicked on) of visitors to determine how to upgrade and improve the site and how to best interact with the site visitor. Click flow data is optionally placed in a cookie on the hard disk or in the RAM memory of each visitor.
- d. Visitors can simulate the results their business would enjoy from subscribing to PUMP service. Information input into the simulation can be optionally stored in a cookie or in a PUMP database.

- e. When the prospective business user decides to subscribe, in a preferred embodiment, she fills in one or more forms. The forms provide information such as store profile (e.g., name of store, address, owner's name, key employees' names and titles, type of business, product descriptions, etc.), marketing information (e.g., square feet in store, demographic composition of market, top selling products, traffic data, etc.), preferred commodity and information sets to use in Merchant Window, and other information.
- f. If the PUMP business user calls a service representative at the PUMP call center, the service representative's standard computer is equipped to access the full history of the user's involvement with PUMP. The service representative can ask the business user questions and update both the profile of the business as well as personal profiles of one or more individual employees of the business. This is be helpful to the PUMP operator, since the more that is known about not only about the PUMP subscribing business, but also about individual employees, the more useful PUMP can be in making helpful suggestions that will benefit subscribing companies and their employees.
- g. The PUMP operator makes Extranets available to the various business users (e.g., vendors, wholesalers, retail merchants, Fulfillment Houses, and the Internet portal company). Extranet private account pages offer the opportunity to broaden and deepen the profiles of businesses and their employees by offering benefits. When a person (whether responding on behalf of the company or as an individual) accepts an offer, she is asked to provide delivery information (i.e., where to deliver benefit and to whom) and benefit options preferences (e.g., "What style and color would you like?"). An optional embodiment uses one or more of the three windows (i.e., Merchant, Portal, and/or Infomediary) on Extranet account pages. As long as a business

remains a subscriber to the PUMP service, the business profile is maintained and may be improved as PUMP gathers more information.

- 5           h. The profile building process of the PUMP business user ends when no additional information is input into the PUMP system or when the business cancels its PUMP subscription.

FF. An exemplary embodiment of the ICE system is shown in Fig. 32. Optional components are described in the following:

- 10           1. The Magnet attracts the customer to revisit the retail store, to visit a number of web sites, and to visit a number of communities.
- 15           2. Virtual communities are online organized groups of people with a shared interest. The Magnet provides a method of attracting members to the communities efficiently.
- 15           3. The Framework is an electronic marketplace that uses retail merchants as an attraction for suppliers to join. The Magnet provides a method of attracting merchants to the Framework efficiently.

GG. An exemplary embodiment of the Magnet Subsystem is shown in Fig. 33. One or more of the optional components are described as follows:

- 20           1. The Framework is outside of the Magnet subsystem, but depends on the Magnet for a supply of retail merchants to participate in the Framework.
- 25           2. Virtual communities are outside of the Magnet subsystem, but depend on the Magnet for a supply of members to participate in the communities.
- 25           3. The Bonding Site is a multi-media-providing web site that offers customizable commercial transactions, virtual communities, information, and fantasy entertainment to its users.
- 30           4. ICE back-end system is a computer network which hosts the servers and databases which maintain profiles necessary to manage customer, retail merchant, Fulfillment House, and supplier relations. The ICE back-end system also performs the functions of an order processing server.

5. Affiliated sites are web sites which are promoted on the Bonding Site, such as, for example, a retail store's web site, Infomediary web sites, and community web sites.
6. Biometric sensors, such as fingerprint recognition systems, allow customers to be identified positively.
7. A digital camera attached to a computer, combined with the proper software, is able to read a barcode on a printed receipt.
8. The store server is a standard computer located in the store that handles the input and output from the ICE point-of-sale terminals and communicates with the ICE back-end system.
9. The wireless network allows the SCC to access the Internet, the Bonding Site, the ICE back-end system, and the telephone network.
10. A standard personal computer is a means to access the Bonding Site after the customer leaves the retail store.
11. A number of terminal devices are available at the store point-of-sale, including barcode scanners, credit card scanners, and computer displays.
12. A position tag uses a unique identifying code which is matched to a precise location in the store. Position tags are located throughout the store wherever a shopping cart can go. They are sensed by a position sensor which is attached to the SCC. Position tags allow ICE to alert the customer on the SCC display whenever the shopping cart is in the vicinity of an item on sale.
13. A standard printer attached to the personal computer can print shopping lists complete with barcodes.
14. A special printer is capable of printing standard sales receipt information as well as promotional messages. The printer can also prints barcodes.
15. The customer can decide what to purchase from the retail store from the convenience of her own home. She can use the store's online

- catalog and her own online customer extranet personal account which contains her shopping history from the store. She can produce a customized shopping list which can be printed out using her personal computer and a standard printer. The shopping list printed out can contain the list of the products that she wants to buy, the store layout with codes to indicate where the products are located that she wants to buy, and a unique barcode. The barcode identifies the customer account and optionally can be scanned into the SCC when the customer gets to the store. The shopping list can be automatically loaded from the customer's extranet personal account to the SCC for convenience to the customer.
- 10
16. The receipt has printed on it standard transaction information such as the specifications for the items purchased, tax, and the total price. The receipt also has one or more promotional messages printed on it which are generated using rules related to the profile of the customer, the products purchased, or the store. In addition, a barcode which identifies the shopping session of the customer is printed on the receipt. This barcode may be scanned into a digital camera connected to a standard personal computer which is equipped with a special browser. When the barcode from a receipt is scanned and the browser is activated, the computer will display a customized configuration of the Bonding Site, based on the profile of the customer. The receipt also can allow ICE to load into the customer extranet account the list of product specifications purchased during the shopping session.
- 15
- 20
- Finally, the receipt barcode can be scanned into the SCC on a future shopping trip in order to connect together the profile information from the two shopping sessions.
- 25
17. The shopping cart computer (SCC) is a core component of Magnet that forms the basis for saving the customer time and money in shopping in the store through the Shopping Program, and also
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provides an entertainment medium by using the Bonding Site programming that the customer can use while standing in the checkout line. Finally, the Closing Program provides the self-addressed email program that funnels customers to specific web sites and multimedia educational and entertainment channels, accessed through a personal computer or a television with a set-top box.

- Exemplary information flows are:
- a. The retail merchant receives information regarding Bonding Site and Shopping Program performance in his store. He can also specify and customize information that his customers will see on the Bonding Site and in the Shopping Program.
  - b. The customer can access virtual communities from a personal computer or from the SCC.
  - c. A local area network (LAN) is used, in one exemplary embodiment, to connect the Bonding Site, ICE back-end system, the Framework, virtual communities, and the wireless network.
  - d. Link between the Bonding Site and the local area network.
  - e. Link between the ICE back-end system and the local area network.
  - f. Link between the Bonding Site and the Internet.
  - g. Link between the Bonding Site and a private network.
  - h. Link between the ICE back-end system and the store server.
  - i. Private network which serves as an alternative communication channel.
  - j. Link between the private network and affiliated sites.
  - k. Link between the local area network and the wireless network.
  - l. Link between the Internet and the standard personal computer.
  - m. Link between the Internet and the affiliated web sites.
  - n. A barcode code read by the digital camera goes to the computer.
  - o. A receipt with a barcode printed on it can be used to access a web site with a customized configuration of the Bonding Site. The customer

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- takes an ICE receipt with a barcode on it and scans it using the digital camera, or alternatively, a barcode scanner, attached to a personal computer.
- 5           p. Identification data flow that positively identifies a customer.  
q. Wireless connection between the SCC and wireless network  
r. Position information sensed by the position sensor.  
s. The printer prints standard sales receipt information, one or more promotional messages, and a barcode.  
t. The barcode printed on a sales receipt from a previous shopping session can be scanned into the SCC to provide a connection to the profile of the customer.  
10           u. A barcode printed on the shopping list can be scanned into a barcode reader on the SCC to positively identify a specified customer shopping list.  
v. The customer can interact with the SCC in the store, and with a personal computer afterwards or before visiting the store. The customer receives from promotions from the screens of the SCC and the personal computer.
- 15           20 HH. An exemplary embodiment of the of ICE Magnet Process is shown in Fig. 34. Optional steps comprise one or more the following:  
a. The process starts.  
b. If the customer is new to the SCC, she may need to run a brief training program to learn how to use it.  
25           c. The training program covers the basics in the Shopping Program, the Bonding Site Program, and the Closing Program.  
d. The customer may optionally input a form of identification into the SCC. Optional types of identification include biometric ID, barcode on a shopping list, receipt barcode from a previous shopping session, user

- name and password, ID number, barcode from the customer or loyalty card, or magnetic stripe swipe from a credit, debit, or smart card.
- e. If the customer has put in an ID, ICE retrieves the customer's profile from the ICE back-end system.
  - 5 f. ICE runs the Shopping Program.
  - g. ICE runs the Bonding Site Program.
  - h. At the checkout, the customer again has the opportunity to display some form of ID.
  - i. If identification is presented, ICE again will retrieve the customer's profile.
  - 10 j. ICE runs the Closing Program.
  - k. The receipt is printed.
  - l. The process stops
- 15 II. An exemplary embodiment of the Shopping Program Process is shown in Fig. 35. Optional steps comprise one or more the following:
- a. The process begins.
  - b. The customer decides whether not to use speed shopping.
  - c. If yes, the customer accesses the shopping list from her personal account from the customer extranet and downloads it to the SCC. ICE gets the customer's profile.
  - 20 d. The customer can access the store's online catalog to augment her shopping list.
  - e. The SCC displays the shopping list, the store's layout, and the location of the products in the shopping list.
  - f. The SCC displays buttons or flags on the screen that indicate which products are being promoted.
  - 25 g. The SCC continuously monitors the position sensor.
  - h. When the SCC comes within range of a position tag, it reads the position.
- 30

- i. ICE checks the store's product database to determine which products are in the vicinity of the shopping cart.
  - j. The SCC displays product promotion buttons or flags that indicate which products within a predetermined range of the shopping cart are being promoted.
  - k. The customer has an opportunity to select one of the product promotion flags indicated on the SCC screen.
  - l. When a promotions flag is selected, the products promotion screen is displayed.
  - 10 m. With each product (e.g., in a grocery store) displayed on the screen, a button is optionally available that lists recipes that use the product as an ingredient. This feature has the potential to increase cross selling of grocery products.
  - n. The customer can optionally display recipes to evaluate if she would like to try one or more of them. If so, she may decide to purchase the additional products needed to complete the recipe(s). Cookbooks can also be optionally promoted for sale.
  - 15 o. The customer has the option of accepting a promotion. By pressing an indicated button, she can get credit for the promotion when the product is actually barcode swiped at the checkout.
  - p. ICE credits the customer's account for the benefit offered by the promotion.
  - 20 q. The process ends.
- 25 JJ. An exemplary embodiment of a Promotional Message Shopping Cart Computer Screen is shown in Fig. 36. Optional components include the following:
- 1. The product category promotions window shows the shopping list that the customer has loaded into the SCC. The window also shows two

- 5 kinds of buttons next to product specifications: recipe buttons, and product category promotion buttons.
2. 20 Recipe buttons indicate recipes that designated products are an ingredient in. By pressing one of these buttons, the customer will see a description of the recipe, in text and photographs. She may decide to buy the rest of the ingredients for a particular recipe.
3. 10 Product category promotion buttons may be purchased for a limited time period by product manufacturers. Promotions are targeted to shoppers that have listed in their shopping list a product within a particular category. In this example, the Yellow Valley Flour company has bought a button in order to take business away from a competitor, the Blue Hill Flour company.
4. 15 The products positional promotions window is a service offered to the retail store or to the manufacturer of products. If the store or manufacturer is trying to sell particular products quickly, products which are being promoted are flagged within this window whenever the shopping cart comes within a designated distance or range of the product.
- 20 KK. 25 An exemplary embodiment of Product Promotional Messages Screen is shown in Fig. 37. Optional components include the following:
1. A customer that selects a product category promotion will see a comparison between two or more products. This comparison is designed to make a promoted product attractive to the customer. The customer may decide to switch brands based on this comparison.
  2. In pressing the "I Accept" button, the customer notifies ICE to credit her account when Yellow Valley Flour is scanned at checkout.
  3. The customer that selects a product positional promotion will see information designed to influence the purchase of the promoted product.

4. Again, in pressing the "I Accept" button, the customer notifies ICE to credit her account when the promoted product is scanned at checkout.
- LL. An exemplary embodiment of the Bonding Site Programs process is shown in Fig. 38. Optional steps comprise one or more of the following:
- a. The process begins.
  - b. The customer has the option of choosing to be trained to use the Bonding Site.
  - c. Training will include a simple program that shows the shopper how to use the functions and features, and how to enjoy the benefits of the Bonding Site.
  - d. The customer will have the option to make purchases online using the shopping cart computer or using a personal computer.
  - e. If she so chooses, the customer can enter into the transaction program, which gives her access to making purchases using the SCC or personal computer.
  - f. The customer will have the option to learn more about and enter into virtual communities online using the shopping cart computer or personal computer.
  - g. By responding appropriately to the Bonding Site initial screen, the customer can enter into the list of possible virtual community memberships that are open to her.
  - h. The customer also can choose to see an information option available to her on the Bonding Site opening screen.
  - i. By running the information program, she can access information regarding store products, policies, and other information.
  - j. The customer can choose to be entertained by fantasy programs.
  - k. If the customer is not interested in fantasy the process stops.
  - l. The customer can run games, video clips, and other programming for the purpose of entertainment.

- m. After running transactions, community, information, or fantasy programming on an SCC, the customer will be given the option of seeing similar programming while visiting the Bonding Site from a personal computer.
  - 5 n. If she so chooses, the customer can input her own personal email address into the SCC. A promotional email message will be sent to her mailbox to remind her of her choices. Each choice will optionally have one or more hyperlinks embedded within the email message. By clicking on one of the hyperlinks the customer can go to a customized site that is configured to her profile preferences.
  - 10
- MM. An exemplary embodiment of a Bonding Site Promotion is shown in Fig. 39. Optional components include the following:
- 1. The customer can get information through the Bonding Site.
  - 15 2. An in-store product catalog is available through the Bonding Site.
  - 3. There will be opportunity to promote the customer (e.g., loyalty, credit, debit, check cashing, smart) card while the customer is standing in line at the checkout.
  - 4. Shopping promotions, such as the Speed Shopping or the Positional Shopping Programs, can be promoted through the Bonding Site.
  - 20 5. The web site of the retail store can be promoted through the Bonding Site.
  - 6. Virtual communities can be promoted through the Bonding Site.
  - 7. The benefits of Infomediaries can be promoted to the Bonding Site.
  - 25 8. Media channels (e.g., AOL Time-Warner, CNN, ESPN, Disney) can be promoted through the Bonding Site.
- NN. An exemplary embodiment of a Bonding Site Screen is shown in Fig. 40. Optional components include the following:

1. Multimedia games and videos can be chosen on the Bonding Site main screen.
2. A video window is optionally visible on the main screen of the Bonding Site.
- 5 3. Virtual communities offer member-generated information archives about targeted topics of interest to a customer.
4. Information sources tailored to the profile of the customer can be made available in an information window, including access to the customer's private extranet account.
- 10 5. Various transaction options are possible, including access to the Merchant Window associated with the sponsoring retail store, the Infomediary Window, and the Portal Window. Also optionally accessible would be the retail store's web site.
- 15 OO. An exemplary flowchart of a Self-Addressed Promotional Email Process is shown in Fig. 41. Optional steps comprise one or more the following:
  - a. The process begins.
  - b. ICE accesses the customer profile and/or clickstream record to determine what offers to the customer are most likely to be accepted.
  - 20 c. ICE makes one or more offers to the customer.
  - d. If the customer is interested in learning more about an offer she can press a software button on the touch screen of the SCC. Otherwise the process stops.
  - e. The customer is asked for her email address.
  - 25 f. After leaving the store, the customer can open the self-addressed email message from ICE by using a PC.
  - g. If one of the offers is appealing to the customer, she may click on a hyperlink embedded within the email message in order to go to an affiliated web site.
  - 30 h. The process stops.

PP. An exemplary embodiment of a Promotional Email Received on a PC Screen is shown in Fig. 42. Optional components include one or more the following:

- a. If a customer in a retail store standing in the checkout line indicates an interest in a particular subject, such as University of Alabama football, she will be given an option to enjoy programming after leaving the store from a personal computer, a television or a combination computer/television device. By sending herself a reminder email message addressed to her personal email box from the SCC, she can later access the message from a personal computer/television. In this example, the customer has indicated in interest in Alabama's next football game. The email message that she receives on her personal computer/television offers a hyperlink to watch a program related to her interest.
- b. If the customer has expressed an interest in an online community, the hyperlinks in the email message allows her to find out more information about the community.
- c. One of the features of using promotional email messages is that the sponsoring retail store can benefit from programs which will encourage the shopper to return to the store and spend more money.
- d. Promotional email messages will allow and facilitate loyalty programs that will be enjoyed by the customer.
- e. Customers will also benefit by having easy access to information related to her interests.
- f. Promotional email messages will allow ICE an efficient method of promoting customer or loyalty cards.

QQ. An exemplary embodiment of a Rules-Based Promotion is shown in Fig. 43. Optional components include one or more of the following:

1. A generic example of a rules-based promotion generator starts with any barcoded product that is purchased in the retail store (You Buy). When the product is scanned by the checkout clerk, the system knows what the product is and can make inferences about the customer (The System Knows About You). ICE invokes a rule based on the product profile (The Rule Is). A promotional message is generated, which is shown on the SCC display screen, or printed on the promotional receipt (The Example Promotion Reads).
  2. A more specific example invoking the rules-based promotions is shown.
- RR. An exemplary embodiment of a Promotion Sales Receipt is shown in Fig. 44. Optional components include one or more of the following:
1. Standard sales receipt information includes the specifications of the purchased products, the price of each individual product, tax, and the sales total.
  2. A promotional window shows messages based on profiles.
  3. A message promotes the barcode.
  4. A barcode on the receipt identifies the shopping session. The barcode can be scanned into an SCC on a later shopping session to provide continuity between shopping sessions (e.g., for game continuity, etc.). The barcode can also be scanned into a digital camera connected to a personal computer, configured with special software, that will take the user online to the Bonding Site. The Bonding Site will be configured for the profile of the user.
- SS. An exemplary embodiment of a Shopping Cart Computer Subsystem is shown in Fig. 45. Optional components include one or more of the following:
1. A flat panel, LCD screen is used. Customers can touch this screen to trigger software buttons shown on the display.

2. A biometric sensor, such as a fingerprint recognition device, allows positive identification of a customer from the SCC.
  3. A compact package houses the CPU and associated electronics.
  4. A position sensor reads position tags located throughout the retail store.
  5. A wireless communications unit provides a communications link with the Internet and the web sites used in the ICE network, as well as with the standard telephone network.
  6. A barcode reader reads the barcodes from the receipts from previous shopping sessions, from products that are scanned in the store, as well as the barcode printed on a shopping list.
  - 10 7. A telephone handset is optionally available in the SCC subsystem to allow voice communication through the SCC.
  8. A magnetic stripe sensor allows the customer to swipe cards (e.g., credit, debit, smart) at the shopping cart.
  - 15 9. A sound system includes a sound card, a sound generator, and a loudspeaker.
- TT. An exemplary embodiment of a Position Sensor is shown in Fig. 46. Optional components include one or more of the following:
1. The shopping cart computer receives position information from the position sensor.
  2. The position sensor picks up position information from the uniquely coded location or position tag.
  - 25 3. Location tags are located throughout the retail store wherever a shopping cart can go near products that are being promoted.
- UU. An exemplary embodiment of the Closing Program Process is shown in Fig. 47. Optional components include one or more of the following:
- 30 a. The process begins.

- b. The SCC display shows, during the Closing Program at the end of the shopping session, the results of the shopping session. The results include the Bonding Site session results.
  - c. The closing program shows purchase results after the cashier rings up the sale.
  - d. The closing program shows results from promotions.
  - e. It shows special results (e.g., game scores, an email message from another shopper, etc.).
  - f. The closing program shows promotions which are based on profiles and/or clickstream history of the customer.
  - 10 g. The customer has the option of sending herself an email promotional message to remind herself of the benefits offered.
  - h. If she accepts, ICE will send the promotional email message to the email address that she has specified. The received email message will have one or more hyperlinks that take the user to promoted web sites and/or multimedia channels.
  - i. In any case, ICE prints the receipt at the end of the transaction, including the promotional messages which are based on profiles.
  - j. The process ends.
- 20
- VV. An exemplary embodiment of the Community Building Process is shown in Fig. 48. Optional steps include one or more of the following:
    - a. The process starts.
    - b. The customer goes to the Bonding Site.
    - 25 c. One or more links to virtual communities are accessible from the main page of the Bonding Site.
    - d. The visitor decides if she is interested in one of the communities.
    - e. If so, she can choose a virtual community that interests her. She can visit the community site, and read some of the threads of discussion in the community archives.
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- f. After checking out a particular community, the visitor can make a decision on whether to join the community.
- g. If she decides to join the community, she goes to a signup page on the community web site.
- 5 h. The process ends.

WW. An exemplary embodiment of Community Aggregation using the Bonding Site is shown in Fig. 49. Optional components include one or more of the following:

- 10 1. A number of retail stores funnel a stream of customers to various virtual communities through the SCC and through a personal computer after the customer leaves the store.
- 2. The communities' focuses can be as varied as the interests of store customers.
- 15 3. An Infomediator serves as a profile broker between community members and marketers.
- 4. A number of marketers are attracted to doing business with the Infomediator based on the anonymous profiles brokered by the Infomediator.

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Possible information flows include:

- a. The information that a customer in a retail store receives and submits in the process of becoming a member.
- b and c. The community member profile and commodity profile information brokered by the Infomediator.

- 25
- XX. An exemplary embodiment of the Framework Building Process is shown in Fig. 50. Optional components include one or more of the following:
- a. The process begins.

- b. The merchant implementing ICE in a retail store allows customer traffic to build up on the Bonding Site and affiliated sites.
- c. The merchant will be interested to know how ICE is performing in his store. He can go to a private online merchant extranet account that gives him feedback on the system's performance. Included on the extranet private page is information related to the Framework electronic market.
- d. Since the retail merchants that have implemented ICE in brick-and-mortar retail stores regularly check on the monitoring account pages provided by the ICE system, and since the merchants constitute highly qualified sales prospects for suppliers in their industry, the merchant extranet private account page represents a good opportunity for suppliers of the retail merchant to market commodities to the retail merchant. These suppliers are attracted to participate in ICE due to the availability of qualified buyers for their commodities. Suppliers in vertical supply chains, or hubs, will be attracted in this way. A vertical hub constitutes a segment within a particular industry (e.g., the manufacturers and wholesalers that supply grocery store chains).
- e. Suppliers in horizontal supply chains or hubs will likewise be attracted.
- f. The final step is to attract vertical hubs to do business with horizontal hubs.
- g. The process stops.

- YY. An exemplary embodiment of the Merchant Extranet Screen is shown in Fig.
- 51. Optional components include one or more of the following:
    - 1. The SCC summary window gives the retail merchants a summary of SCC performance statistics for the week.
    - 2. The marketplace window provides the connection with the Framework electronic marketplace.

ZZ. An exemplary embodiment of the Process to Attract Suppliers to the Framework is shown in Fig. 52. Optional steps include one or more the following:

- a. The process begins.
- 5 b. ICEOP runs advertisements in trade publications to attract suppliers within given industries to participate in the Framework.
- c. The supplier goes to the SAMIS web site to analyze the benefits of ICE participation for his business.
- d. The supplier decides whether or not he is interested in participating in ICE.
- 10 e. If he is interested, he can signup.
- f. The process ends.

AAA. An exemplary embodiment of the Suppliers Extranet Screen is shown in Fig.

- 15 53. Optional components include one or more the following:
  1. The supplier from either a horizontal hub or a vertical hub that signs up to participate in the Framework will use a supplier extranet private account page similar to the merchant extranet account page. The target market potential customer activity report is a report that shows certain market activity of the supplier's potential customers.
  - 20 2. In addition, the supplier will also have access to industry news, headlines in his particular industry, access to specialized manager communities within his industry, as well as the Framework electronic marketplace where his company can buy and sell commodities.

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BBB. An exemplary embodiment of the Web Store Screen is shown in Fig. 54.

Optional embodiments include one or more the following:

1. The Web Store is offered on the transaction section of the Bonding Site. The Merchant Window is one of three optional windows on the

Web Store, the other two being the Portal Window and the Infomediary Window.

2. The Merchant Window contains a product catalog of a sponsoring retail store, as well as a catalog of a Fulfillment House.
- 5      3. The sponsoring retail store catalog allows the customer to specify any of the products listed that are stocked on the shelves of the store to be included in a customer's shopping list.
- 10     4. The Fulfillment House catalog allows the customer to specify any of the products listed in the catalog to be ordered for special delivery, either to the store for later pickup, or to a specified shipping address.
5. The Web Store contains an Infomediary Window that connects the consumer with one or more Infomediaries.
- 15     6. The Web Store contains a Portal Window that connects the consumer with a number of Internet portal companies.

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CCC. An exemplary embodiment of an Identification Key is shown in Fig. 55. The ID key is a record with a number of independent identification files. Each ID file contains identifying information that helps to establish the identity of a person using ICE, or that otherwise tracks a customer's behavior (i.e., clickstream, data entry, or purchase) during a session using ICE, or that connects two or more sessions together. Example ID files include one or more of the following types of information:

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- Receipt barcode,
  - Customer extranet personal account password,
  - 25     • Bonding Site cookie, which is kept on the personal computer of the customer,
  - Biometric (e.g., fingerprint, retina scan, voice print) information,
  - Customer or loyalty card barcode,
  - Anonymous ID number,

- Personal ID number (e.g., social security number),
- Personal email address, and
- Shopping list printout barcode.

5 DDD. An exemplary embodiment of a Framework Infrastructure is shown in Fig. 56.

Optional components include one or more of the following:

1. Vertical hubs comprise aggregates of companies that serve relatively narrow industrial segments (e.g., a vertical supply chain).
2. Horizontal hubs comprise aggregates of companies that serve customers across industrial divisions or sectors (e.g., banking, insurance, advertising).
3. Each industrial hub can optionally have a specialized supplier extranet that serves managers of the suppliers within the hub by providing them with information regarding certain of their customers' behavior (e.g., which advertisements are getting the most attention, selected profile information regarding key customers) within their respective extranet private accounts, while connecting the suppliers to the Framework electronic marketplace.
4. A Framework terminal for vertical hubs manages the interaction between the participants in the vertical hub, and other parties that are buyers and/or sellers in the Framework electronic marketplace.
5. A Framework terminal for horizontal hubs manages the interaction between the participants in the horizontal hub, and other parties that are buyers and/or sellers in the Framework electronic marketplace.
6. Retail stores use a merchant extranet that serves managers of the retail stores by providing them with information regarding their customers' behavior at the Bonding Site, while connecting them to the Framework electronic marketplace.

7. Grocery store managers that use the merchant extranet private account will be able to track results produced by ICE, as well as use the electronic marketplace provided by the ICE Framework.

5           Exemplary data flows are:

- a. Managers within the food industry can access the food industry extranet. Each manager can have his own private account on the extranet, and can customize his extranet screen according to his professional and personal profile. A food manufacturer marketing manager can, for example, find out from an extranet screen that a particular grocery store chain is opening new stores in Wisconsin. The manager may plan a new campaign to sell a new line of products and send out new marketing information to the Framework to be distributed to selected present and potential customers.
- b. Managers within the cleaning products industry can access the cleaning products industry extranet. A manager for a soap company gathers information about key grocery chains and other outlets for his company's products. He decides to update his company's product catalog that is offered to the Framework marketplace.
- c. Managers within the payroll and accounting industry can access the payroll and accounting industry extranet. A manager for a payroll services company has increased his company's revenue by 30 percent in one year by targeting small, regionally based grocery store chains and transacting business using the Framework.
- d. Managers within the banking and financial services industry can access the banking and financial services industry extranet. A manager for a bank is keenly interested in collaborating with grocery stores to open in-store bank branches in the Midwest. She is able to gather enough information from the market research capabilities of ICE Framework in order to target which grocery store chains she should approach.

- e, f, g, and h. The supplier extranet connects to a Framework terminal that connects specific hubs to other buyers and sellers within the Framework marketplace.
- 5           i. Information exchanges and commercial transactions can take place between companies in vertical hubs and horizontal hubs. For example, the food manufacturer marketing manager may contact the banking manager mentioned above to secure a loan for a project.
- j. and k. The merchant extranet connects to the Framework terminals that connect to the vertical and horizontal hubs.
- 10          l. The grocery store manager sends and receives information and is able to transact business using the Framework.
- 15          EEE. An exemplary embodiment of a Customer Extranet Personal Account Screen is shown in Fig. 57. The customer will have a number of options using the customer extranet that save time and money by allowing her to use speed shopping. The customer extranet helps to manage her relationships with others she meets in virtual communities, and offers a number of other benefits.
- 20          FFF. PUMP Business System Lifecycle is shown in Fig. 58, indicating four principle stages of the PUMP business system.
- 25          a. The Core Business System (CBS) provides a flow of customers in retail businesses, and a platform on top of which PUMP operates.
- b. PUMP P1 stands for the first level implementation of PUMP, and comprises a business potentially larger than CBS alone.
- 30          c. PUMP PX stands for Pump eXtension, and may be implemented when PUMP is applied to multiple retail industries. When this happens, the number of customers is increased. The opportunity for building broader customer profiles is also increased.
- d. PUMP PM stands for a Pump infoMediary business, which is an information intermediary that acts as an efficient middleman between

buyers and sellers of products and services.

## **6.0 Description of the Preferred Embodiments**

In accordance with the present invention, a collection of electronic hardware and software, paper receipts, signage and displays, and human interaction creates a process using an intermediary network that benefits retail customers and businesses.

In particular, in a preferred embodiment, a PUMP comprises a means of using a network of computer and communications equipment with a hierarchy of functionality that comprises a plurality of stages:

- 10        1. Attracting, educating, and recruiting retail merchants, wholesalers, and vendors in order to participate in the network of services made possible by PUMP;
- 15        2. Selling product or service to customers by means of a standard electronic credit-card-type of terminal in a brick-and-mortar retail establishment;
- 20        3. Promoting a benefit to the customer in a brick-and-mortar retail establishment using a point-of-sale printout that advertises an Internet web site (i.e., the Web Store);
- 25        4. Migrating some of the retail customers to the Web Store site to take advantage of a benefit, and, while at the Web Store, introducing the customer to three main windows that comprise the Web Store Home Page; and
5. Adding databases and extranets to serve customers, retail merchants, wholesalers, and vendors to establish the functionality, processes, and procedures necessary to form an Infomediary business.

According to the present invention, merchants can benefit from increased revenues that they can enjoy by signing up to be a part of the PUMP network. Initially, merchants are attracted to learn more about PUMP by means of publicity and advertisements. By visiting the Sales And Marketing Information System

(SAMIS) web site, or by telephoning the SAMIS service center, business people learn more about PUMP's details.

SAMIS essentially provides a sales and marketing web site for the PUMP operator that offers benefits to prospective retail merchants, wholesalers, and vendors 5 who can become PUMP users. Specifically, it can offer retail merchants enough information to help them make a decision regarding whether PUMP can help them achieve the goal of improved bottom line.

SAMIS has a number of features and benefits:

- A. It helps the PUMP operator in selling PUMP to prospects without pressure in a supportive environment.
- B. It saves the PUMP operator manpower and costs in sales, service, installation, and maintenance.
- C. It gives the prospective merchant an overview of PUMP and how his business can benefit.
- D. It gives away something! If offers a free calculation to show a merchant how much he can expect to earn from the service, based on the characteristics of his store.
- E. It shows an example (e.g. text, graphics, sound, and/or video) of the training offered on the Extranet web sites to employees and various stakeholders to help them become proficient in PUMP operations.
- F. It offers support to help the merchant evaluate what will be necessary for him to get started (i.e., forms to fill out, equipment to be configured and installed, financing, and administration to be set up, etc.).
- G. It connects the merchant with a salesperson within minutes, upon request.
- H. It allows the merchant to submit an application for PUMP service in several ways, including online, by telephone, and by standard fax.
- I. It offers to send (email, standard fax, or snail mail) additional information to the merchant regarding PUMP.

- J. It shows a list of other stores enjoying the service.
- K. It shows the results, testimonials, and other feedback of certain stores that have agreed to make public (e.g., news releases) their results with using PUMP.
- 5 L. It offers additional services and benefits (e.g., web site design and hosting options).
- M. It can configure retail merchant equipment, service and support needs, and guide the retail merchant to understand sales or leasing, service, and maintenance contracts.
- 10 N. It connects the merchant with a certified equipment and service supplier.
- O. It allows service and sales representatives of equipment suppliers to access online equipment and service information in a database regarding various merchants in a region or territory.
- 15 P. It allows a merchant to perform simulations in several areas, including:
  - a. The merchant can see the lifecycle of his involvement with PUMP, starting with ordering and starting the service, maintaining the service, and building the service. Projected costs and benefits can be listed with each stage.
  - b. The merchant can perform "what if" scenarios by specifying different equipment configurations and can see the projected financial results for one or more stores with given profiles.
  - c. The merchant can simulate the experience of a typical customer of PUMP in order to understand why customers will be attracted to use it.
- 20 Q. It allows the merchant to specify and order his own, personalized home web site.
- R. It allows the merchant to specify, order, and pay for the POS equipment needed to support PUMP for his store using any of a

variety of media (e.g., web, standard telephone, standard fax, standard handheld computer, and/or paper).

S. It allows the merchant to input the profile of his store, which can comprise:

- 5 a. names of key personnel, including the owner and the manager of a store,
- b. the address of the store,
- c. the equipment configuration in the store,
- d. signage/displays used in the store, and
- e. the Web Store commodity and information profile offered to customers in the Merchant Window, and
- f. demographic and traffic information related to the store's location.

T. It provides Service Center Service Representatives with a number of functional capabilities:

- 15 a. Service Rep Standard Personal Computers have interfaces that support capturing clues regarding customer profiles. For example, a Service Rep who is talking on the phone to a customer hears a baby crying in the background. The Service Rep standard computer CRT screen can have a number of buttons that the Service Rep can point to and click on. One such button, for example, optionally is labeled: "Children in household."
- b. Reps are able to access a single, comprehensive view of all the transactions and interactions a stakeholder has had with PUMP.

25 U. It has a Frequently Asked Question (FAQ) section to answer questions regarding, for example:

- a. Maintenance
- b. merchant sales commissions on in-store standard credit-card-type of terminal and/or Web Store sales

- c. adding/removing products to/from Web Store product format
  - d. adding/removing stores to/from PUMP service
  - e. adding/removing equipment (standard credit card terminals, standard printers, etc.) to/from in-store configuration.
- 5           f. ordering signage/displays
- g. ordering products (e.g., cell phones, pagers, calling cards, etc.) for in-store inventory
  - h. additional services and benefits: product and service discounts through the Infomediary Service.

10

If the retail merchant chooses to enroll, the merchant's brick-and-mortar store will be set up to operate in the PUMP network. The equipment necessary to support PUMP typically comprises a UPC standard barcode scanner, a standard credit-card-type terminal, and a standard printer. Once the store is set up, the checkout clerk 15 simply scans the barcodes of products, Customer Identification Cards, and optionally, receipts, accepts payment, and rings up the sale. The optional receipt and/or promotional printout are printed and given to the customer. In addition, the customer is optionally made aware of in-store signage, displays, and packaging promoting the Web Store.

20

Customers in the store are able to buy a product or service by electronic means. An example of such a service for sale electronically is cellular telephone airtime. A standard electronic credit-card-type of terminal can be used to carry out the sale and works by communicating telephonically with an Order Processing Server.

25

The Web Store comprises a web site with a home page that in its final version is divided into three principle parts: a Merchant Window, a Portal Window, and an Infomediary Window. The Merchant Window typically occupies roughly the top third of the home page Web Store screen, and provides access to dependent screens to permit a customer to purchase products and services. When a customer has placed an order, the order is sent to an Order Processing Server, which then passes the order

on to a Fulfillment House. The Fulfillment House fills and delivers the ordered product or service.

The Portal Window typically occupies approximately one half to a third of the Web Store home page screen. It permits access to all the information and commercial services that are provided by a commercial Internet portal company (e.g., 5 Yahoo!, Lycos, Excite, Go2Net, MSN, Alta Vista, Infoseek, Snap). The Portal Window becomes available by contracting with the Portal Company to provide the service.

The Infomediary Window connects a consumer to vendors selling products 10 and services, which are matched to the consumer's needs and interests. The consumer's needs and interests are assessed over time, based on observed online shopping and browsing patterns, as well as explicit information volunteered by the consumer.

The functionality of the three windows described in this invention optionally is 15 implemented, in one exemplary embodiment, in a non-windows manner. Such functionality has one or more of the following characteristics:

1. The Merchant Window offers to customers:

- A. General product information. Before buying a product or service, 20 customers would want to know:
  - a. what the product looks like
  - b. what the benefits to the customer are
  - c. what product selection there is
  - d. what are the tradeoffs in selecting a particular product
  - e. what cash discounts a vendor is offering, and under what terms.
- B. Product instructions and training (e.g., in text, graphic, and/or video 25 formats). For example, a pharmacy that uses PUMP offers to customers:
  - a. beauty tips
  - b. pharmacy product (e.g., diabetes monitoring machine) 30 instructions for use, and

- c. emergency tips (heart attack, epilepsy, etc.).
2. The Portal Window is screen space rented out to one or more advertisers.
3. The Infomediary Window offers agent services to PUMP stakeholders by
- 5 tracking requests for information from consumers, and offers anonymous customer profiles to retail merchants, wholesalers, and vendors, allowing them to acquire new customers in a cost-efficient way.

The Web Store logs visitors' buying and browsing behavior and optionally

10 saves such information in both cookies on the hard drive of the customer, in RAM memory of the customer's computer, and in databases located on PUMP servers. In this way, the Web Store provides added value to the participants.

Finally, because the elements in PUMP work together synergistically, they function as a whole. When any main piece is removed, then the value to all the

15 participants is lessened. For example, an in-store sale using the electronic standard credit-card-type of terminal starts the PUMP process. The customer then becomes educated about the virtual inventory offered through the terminal by means of promotional displays, packaging, and signage. These means of promotion, combined with the mini-billboard promotional receipt, provide the main catalyst of the PUMP

20 process. The receipt and other promotions route a retail store shopper into becoming an Internet shopper. Once at the Web Store, the customer is instantly aware of the three windows, as they occupy the majority of the home page screen.

PUMP offers value at different levels:

- A. Because the benefits, which are listed above, flow to all of the participating
- 25 parties, PUMP increases the acceptance of retail merchants and retail customers alike.
- B. Because PUMP provides efficient promotional targeting to retail customers, wholesalers, and other vendors, as well as to retail merchants, users are readily attracted to the PUMP system.

In one embodiment, PUMP has one or more of the following general characteristics:

1. It increases the attention share in the minds of brick-and-mortar retail customers regarding a commercial web site. Thus, PUMP is potentially better than search engines or any other current form of web advertising because it occupies an advertising space, which is presently underused.
5. It allows the geographic placement of the consumer. This is possible when the customer goes online to visit the Web Store because she is asked to input the reference store where she was introduced to PUMP. This should be an attractive feature to local business listings that rely on offering products and services that are local to a viewer, like Microsoft's Sidewalk, or America Online's Digital City.
10. It is a marketing tool useful in attracting consumers and gathering info about them. Once viewers are enticed to visit the Web Store, offers of interest and/or value are made to the viewers designed in a way to persuade them to leave information about themselves.
15. It is a revenue builder for the commercial users of PUMP by offering streams of revenue from new customers, and better targeting to old customers.
20. It is a customer relationship management service between end consumers and the other stakeholders (i.e., retail merchants, wholesalers, and manufacturers). It builds trust with the consumer, and acquires increasing levels of permission to market to the consumer.
25. It can be an equalizer between large chain stores and independently owned retail stores by allowing the smaller stores to offer targeted and specialized products, services and information to their customers that are not provided by larger competitors.
7. It is a permission acquisition machine initiated through receipts printed at the point of sale, and through online coupons, which attract the attention of a shopper to begin the dialogue.

8. It provides an excellent forum for online discussion groups. Industry experience has shown that online community groups can effectively provide primary research data.
9. It performs automated recruiting of new commercial stakeholders. SAMIS eliminates most selling costs by recruiting retail merchants, wholesalers, and vendors (including manufacturers) online to participate as stakeholders. First, by attracting candidates by traditional methods, such as print advertising, SAMIS demonstrates its benefits and advantages online. For prospects interested in signing up for the service, a series of forms online may be filled out. Human service representatives are also available via telephone to assist.
10. It maintains rules definitions based on database marketing practices, strategies and tactics. Rules are used in conjunction with profiles to effectively engage PUMP stakeholders in dialogue. Rule-based matching also assists marketers in targeting consumers with appropriate products. For example, when a customer profile includes the purchase of children's products (e.g., baby food), the rules-based system might promote a sweepstakes to win a college education for a child.
11. It offers Customer Cards, including smart, discount, check cashing, credit, and debit cards, to facilitate convenience for customers, and to build profiles for the PUMP operator to use.
12. It is an engine for database marketing. Because it drives traffic to the Web Store, entices customers to grant permission to be marketed to, and, in the process, acquires information on customers, PUMP serves as a catalyst to help database marketers use profiles to sell to consumers.
13. It is the basis for an Infomediator business because it is an Internet traffic pump, because it is an online community builder, and because it connects vendors offering targeted products and/or services with profiled consumers.
14. It comprises a system that routes a customer in a retail or other type of business to the Web Store via a promotional message, which includes the Web Store's URL.

15. It comprises a commercial web site (Web Store), the home page of which allows customers thereto to purchase products and services and/or to activate a hyperlink to a Portal Web Site, which has a Uniform Resource Locator (URL).

5

PUMP has a number of additional attributes that make it even more valuable to its users:

- A. It has a financial banking function with such exemplary features as:
- a. PUMP is a bill consolidator that allows stakeholders to pay the PUMP operator directly, which then pays the various stakeholder creditors.
  - b. PUMP offers financing options for customers, such as customer accounts, loans, and automatic debiting accounts for PUMP products and services.
  - c. Merchant accounts allow merchants to use the PUMP bank for all PUMP related business.
  - d. Financing options for merchants include loans and lines of credit of different types as well as equipment leasing.
  - e. PUMP's bank issues smart cards, credit cards, and debit cards to consumers and businesses
- B. It serves as a communications utility between PUMP users that permits retail merchant to order from wholesalers and manufacturers automatically by virtue of such exemplary attributes as:
- a. It keeps a database with the current inventory in a retail store.
  - b. It allows a retail merchant to update the current inventory database by UPC barcode scanning new product deliveries as they arrive at the store.
  - c. It subtracts a product from the inventory database when the product is scanned at the checkout, and adds the product to an order list.

- d. The merchant has the option to click on customized inventory checklists to submit orders to wholesalers and manufacturers via Extranet.
- C. It builds and maintains stakeholder and product profiles in several databases.
  - 5 In order to personalize PUMP service, all stakeholders (especially customers) are profiled in a database with personal, preferential, and organizational (if applicable) information that saves the stakeholder time, for instance, whenever an Extranet is accessed. Profile information gives the PUMP operator (i.e., the owner of the PUMP service network) valuable marketing information. In addition, products are profiled in a database that assists marketers in targeting consumers with appropriate products. Stakeholders can be given the opportunity to change their profile at any time and to select a set of profile defaults for "fast-path" dealing with the PUMP Operator.
  - 10 D. It allows multi-channel communications (i.e., standard telephone, standard fax, and standard hand-held computer with an optional wireless Internet connection) by Extranet and SAMIS users to allow limited functions like account checking as a supplement to the functionality available on the web.
  - E. Visitors to PUMP web pages can click on an option to have a service rep call them immediately.
  - 15 F. A primary research function available on PUMP tracks where customers go on PUMP web sites and asks, "What didn't you find that you were looking for?"
  - G. It allows stakeholders to format their own bills from creditors online according to stakeholders' own internal requirements.
  - H. Customers are able to see a record of products and services they've bought through PUMP in the past.
  - 20 I. Strategies to keep customers coming back include:
    - a. fostering online communities,
    - b. promoting games, contests, sweepstakes, and incentives,
    - c. allowing customers to have and maintain their own web sites,
    - 25 d. publishing one or more newsletters, and

- e. allowing merchants to drill down into databases to get detailed information on a particular topic of interest.
- J. PUMP has a number of subscription-based services including
  - a. web site hosting, and
  - 5 b. retail merchant home page linking to the Web Store.
- K. Incentive/loyalty programs allow consumers to earn points based on their purchase behavior.
- L. PUMP uses a Quote Generator, which has different functions:
  - a. Public (i.e., Web Store and SAMIS) screens show list prices of products and services with explanations of available discounts.
  - 10 b. Private (i.e., Extranet private account) screens show actual prices, which may be discounted due to incentive rebates or other discounts.
  - c. SAMIS shows merchants estimated Return On Investment (ROI) simulations based on input and existing models for similar businesses.
  - 15 d. Customer private account screens show incentive points that a customer has accumulated.
- M. Email marketing provides a notification service to customers that allows them to specify what, if anything, they would like to receive proactive notification about, including, for example,
  - a. rebates for certain products,
  - b. weekly specials in a product category,
  - 20 c. a financial event happening in a customer's PUMP bank account (e.g., a paycheck or a bill arrives),
  - d. an article is published on a given topic in a specified periodical or field,
  - 25 e. a purchased commodity (e.g., cellular phone airtime) is consumed to the point where the amount remaining falls below a preset threshold, and
  - f. incentive points accrue to allow an upgrade in a service.

- N. PUMP offers an online coupon service that offers rebates on specified products or services at given stores in a geographic area that allows customers to choose which products are printed for rebate on the coupon. In doing so, PUMP offers the possibility to hook the customer with an offer and begin a dialogue (see Fig. 25).
- O. Merchant, wholesaler, and vendor Extranets allow the following.
- a. A retail merchant can break down PUMP performance on one or more store's private extranet account page in a number of ways, including, for example, by store, by product, by revenues, etc.
  - b. Financial data (e.g., for PUMP sales/store information) on a retail merchant's private extranet account page can be formatted and downloaded for inclusion in the standard merchant's accounting computer system.
  - c. Communications suites matched to the merchant corporate profile, as well as individual employee profiles, are used by PUMP to facilitate communications and commerce.
  - d. Commercial stakeholders in PUMP can specify promotions in order to sell products and services that are targeted to the Extranet private pages of customers with qualified customer profiles.
  - e. PUMP makes it easy for users to help themselves by accessing Frequently Asked Questions (FAQs), or by asking discussion groups questions, in addition to getting support from the SAMIS call center.
  - f. The PUMP operator can use the number and types of requests for information from retail merchants, wholesalers, and vendors on FAQs parts of the Extranet (which is, in one exemplary embodiment, the same FAQs mentioned regarding SAMIS) to track problem areas the stakeholder may be having.
  - g. A retail merchant can modify the profiles and formats of products/services for sale on Web Store.

- h. A retail merchant can measure the performance of his store in using PUMP compared to other stores in similar categories (e.g., according to type of store, similar profile, area of country, etc.).
- i. A retail merchant can be encouraged with an incentive to provide intelligence regarding competitors of the PUMP operator, of the Internet portal company, and of the sales agents.
- P. The Extranets on PUMP also can offer training (e.g., using text, graphics, video, and sound) to stakeholders in several areas:
- a. Customers can be trained, for example,
- how to save money using product or services, and
  - how to operate equipment or services.
- b. Store clerks can be trained, for example,
- how to proceed in PUMP sales, and
  - in sales techniques with the objective of helping them make more commissions.
- c. Retail merchants can be trained, for example,
- how to set up the PUMP business in their store,
  - how to train employees,
  - how to increase sales by offering incentives,
  - how to use the merchant account pages, and
  - how to use the PUMP Infomediary service to save time and money in getting the products and services their business needs.
- d. Fulfillment Houses can be trained, for example,
- how to use PUMP to increase their business, and
  - how to use database marketing through PUMP.
- e. Vendors and wholesalers can be trained, for example,
- how to use PUMP to increase their business, and

- how to use database marketing through PUMP.
- Q. PUMP has an optional reminder service that assists consumers in gift giving that includes, for example,
- a. a database with family and friends' profiles recorded, including information on gift preferences (e.g., red wine preferred as a gift for sister-in-law),
  - b. important dates coming up, including public holidays, as well as private dates which are important (e.g., wedding anniversaries, birthdays, graduations, etc.),
  - c. what you gave last year to a particular person,
  - d. gift ideas suggested by PUMP for known preference categories (e.g., a gift certificate from an outdoors outfitter for someone who likes camping), and
  - e. dynamically generated hyper-links to merchants in designated gift categories.
- R. PUMP provides a number of valuable services to customers and other stakeholders; for example:
- a. After a customer orders a commodity, PUMP can reassure the customer by means of email at each step of fulfillment, including confirmation of the order, notification of shipping, and expected time window of delivery. PUMP also gives the customer a means of tracking the delivery.
  - b. The customer can access part or all of her transaction history through her private account page.
  - c. The stakeholder can update her profile at a web site, over a standard telephone, by means of a standard handheld computer, by standard fax, or on paper.
  - d. The stakeholder can give feedback on any web or Extranet page in PUMP.

- e. PUMP provides a service of profiles management in order to keep the profiles current and accurate.
- f. PUMP provides online, moderated discussion forums for stakeholder affinity groups to interact and share information.
- 5 g. The customer, if appropriate, can decide how to be billed (e.g., by credit card, debit account, corporate account, etc.).
- h. PUMP offers stakeholders a consistent set of options with predictable responses across every medium (e.g., web, standard telephone, paper, standard fax, standard handheld computer, etc.) that can be used to interact with PUMP.
- 10 S. PUMP can record cookies on users' computer hard disks and/or in the RAM memory with information including the user's name, email address(es), email notification service preferences, selected products from coupon-building sites, and PUMP web site click flow data. PUMP can extract information from one or more cookies installed on a customer computer hard disk and/or in the RAM memory in order to integrate a customer profile record or file in a PUMP database when the user is visiting a PUMP web site.
- T. In one exemplary embodiment, new PUMP customers can be acquired by attracting visitors to PUMP extranets by means of promotions and advertisements (e.g., "Now you can pay your rent at our web site"). This method of acquiring PUMP customers can bypass retail stores altogether. At an Extranet web site, customers can access a private account page by using a password. Each account page can optionally display one or more of the three windows (Merchant, Portal, and/or Infomediary) described above. The Merchant Window can optionally display commodity and information sets offered to the customer. If the customer makes a purchase through the Merchant Window, a commission can be payable to a sponsoring business (e.g., a landlord that promotes a PUMP Extranet as a means of helping tenants pay their rent)

A process using a web site, such as the Web Store, when combined with the above described promotional means, is properly described as a Portal Magnet. In other words, because PUMP first attracts a customer to the Web Store, and then routes that customer to a portal home page, which leads to other sites, use of the term  
5 Portal Magnet is aptly descriptive.

Another descriptive analogy can be drawn. On one hand, if the millions of web sites in cyberspace are likened to grains of sand on a beach, then the Web Store of the present invention stands out like a boulder on the beach. This happens because, when a retail customer receives a mini-billboard promotional receipt in a  
10 store and sees the other promotions on displays and signs, he is thereby introduced to the Web Store and reminded to go there at least once and/or substantially every time he shops at a participating retail store. Consequently, the Web Store has a much higher attention share than other sites because of the situational, attention-grabbing, targeted nature of the point-of-sale Web Store promotion.

15 In addition to the point-of-sale printouts, the Web Store can be promoted in a retail store in several ways, including means such as the following:

1. An individual retail store can have a customized promotional message on signage and displays (e.g., "Try our imported cheeses at [www.ourWebStore.com](http://www.ourWebStore.com)");
2. Long-distance telephone calling cards and other renewable or rechargeable products, as well as all product packaging, can be preprinted with a caption such as: "EZ replenishing purchase at [www.ourWebStore.com](http://www.ourWebStore.com)" ; and
- 20 3. Products (e.g., calling cards) and their packaging can be used as mini-billboards to actively promote the Web Store with trips, prizes, etc.

25 Details of another embodiment of the invention, including the names of components as well as key functions, benefits, and features for the principle elements of ICE are listed below.

1. Magnet

- Attract the customer of a retail store into using the SCC to save time, to benefit from the useful features, and be entertained while in the store, resulting in the customer returning to the store repeatedly.
- 5
- Attract the merchant to use the ICE by the increased lifetime value of customers that will result.
  - Attract the customer, through the Bonding Site, to explore the useful features and eventually go to commercial web sites and transact commerce.
  - Attract the retail merchant to the Merchant Extranet to monitor customer activity on the Bonding Site and its affiliated web sites and to use the Framework electronic marketplace.
- 10
- 15
- 2. Shopping Card Computer (SCC) Subsystem hardware
    - Provides the physical hardware means to offer to a retail store shopper many of the benefits provided by ICE.
- 20
- 3. SCC Computer hardware
    - Provides the physical computational means to support the shopping and Bonding Site programs interfacing to the retail store shopper.
- 25
- 4. Barcode reader hardware
    - Is able to read standard barcodes from shopping list printouts, and receipt printouts,
    - Is able to read standard product UPC barcodes,
    - Is optionally imbedded in the telephone handset, and

- Is optionally designed with an optical viewer that allows product UPC barcode to be easily and quickly scanned while the product is still on the shelf.
- 5        5. Telephone handset hardware, software, and ordering system
- Allows the customer to make personal telephone calls from the SCC,
  - Allows ordering a product in the store through the SCC before completing the transaction online, whereby the customer can talk with a service representative,
  - Allows the customer to hear confidential information privately, and
  - Allows the customer to use voice commands into an automatic voice recognition system.
- 10      15        6. Wireless network connection
- Is resistant to interception by unauthorized parties,
  - Uses sufficient bandwidth to allow full video and audio transmission, and
  - May optionally use special equipment to insure that in-store SCCs can communicate with no loss of signal due to poor reception.
- 20      7. Position sensor
- Is a device connected to the SCC that reads a unique tag or label that identifies the shopping lane either when the shopping cart is in a store aisle, or when the shopping cart arrives at the checkout counter. This permits the SCC to display a pop-up
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flag and sound an indicator signal whenever the shopping cart is near a product that is being specially promoted.

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- Also allows ICE to route the correct promotional messages to a given checkout printer when the position sensor of an SCC senses a checkout lane identifier. If the customer is using a customer card, or any other form of identification, ICE can then connect the customer's ID with the SCC session. The position sensor also permits ICE to know when to upload the clickstream data from the shopping session and when to display closing program results on the display screen.

8. Construction specifications of the SCC may include:

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- The SCC is made out of rugged materials and designed for abuse.
- It is weather resistance for both moisture and temperature.
- It is easily detachable from the shopping cart by store personnel that have a special key.
- SCC hardware is made using miniaturized components that allows easy stacking a shopping carts in the traditional manner.
- The display screen can be folded up for viewing, or it can be turned down to allow a small child to sit in the child seat.

9. Optional Input modes of the SCC are:

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- touch screen input,
- voice input,
- stylus input,
- customer card (e.g., loyalty card, credit card, debit card, smart card, etc.) input,

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- biometric parameter (e.g., fingerprint, voiceprint, retina scan) input,
- standard computer keyboard,
- standard mouse or similar pointing device, and
- gesture recognition.

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10. Audio flag indicator and speaker

- A sound generator and a speaker allow the SCC to signal special events (e.g., a positional promotion flag) to the retail store customer using sounds.

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11. SCC software

- Provides the software information-processing means of offering to the retail store customer the benefits of the Shopping Program, the Bonding Site Program, the Closing Program, communications system, and operating system.

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12. Operating system

- Provides software management of the functional operational elements of the SCC system.

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13. Shopping Programs

- Provide the software support that allow the retail store customer to enjoy speed shopping, as well as positional, and product category promotions. Other support features included in the Shopping Program are UPC barcode scanning of products to get prices and a calculator function to add up purchase totals.

14. Closing Program

- The closing program is the program that terminates the customer session on an SCC at checkout completion. It can be triggered by a position sensor. It can send promotional information to the SCC screen, to the printed receipt, or in a customer self-addressed email message to the customer's personal computer. Elements of the Closing Program, including the self-addressed email program, can optionally be run any time during a shopping's session.

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15. Promotion and Advertising Modes of the SCC

- Advertising graphics, texts, and images (including video) can promote commodities on the display of an SCC anytime, even when not being actively used by customer.
- Banner advertisements can be used during a customer shopping session.
- Hyperlinks which promote a commodity can be used during a customer shopping session.
- Messages which are audible on the telephone handset or on the SCC loudspeaker can promote a commodity during a customer shopping session.
- Self-addressed email promotion program can send promotional messages to a designated email box.
- Speed shopping program, customer extranet account, store catalog, and the reminder service all serve to help the customer shop more efficiently and estimate the customer more loyal to a brick-and-mortar retail store.

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- Category and positional product promotions cross-sell and up-sell the customer on products.

16. Special ICE printer

- 5 • Prints promotional messages at the point-of-sale, optionally on the sales receipt, for the customer to take.
- Prints barcodes on the point-of-sale printouts that are later read into a digital camera connected to a personal computer, or can be read into an SCC in a future shopping session.

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17. Bonding Site programs

- A set of software programs comprising video, text, audio, kinesthetic, olfactory, and graphics capabilities designed to entertain, educate, inform, and attract retail store shoppers, as well as to establish and support virtual communities.

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18. Communications Programs using the SCC communications system that manages wireless information flows comprising:

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- Information regarding shopping lists from the customer's extranet private account,
- Product information from the store's database,
- Store layout information from the store's database,
- Promotional and positional information on products from manufacturers,
- Bonding Site programming from ICE,
- Closing Program information from ICE,
- Email messages from the customer using the SCC in a store to her own personal computer,

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- Clickstream data summarizing relevant decisions, actions, and choices by the customer sent to the ICE back-end system from the SCC,
- Voice and other audio data using the telephone handset,

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19. **Bonding Site Programs**

- Inform, entertain with fantasy, access communities, and transact commerce with the customer
  - Create a coherent Internet marketing strategy for retailers.
- 10 Bonding Site programs create a stronger relationship between the customer and the retail store, as well as a greater propensity on the part of the customer to visit the retail store's web site.
- Create a new way of acquiring Internet customers.
  - Can be used as an attachment or interface to an existing web site (e.g., the commercial web site of a retail chain) to offer accessory products and services, discussion and chat archives, contests and games, and chat rooms and email utilities (e.g., email newsletter signup forms, etc.).

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20. **Transactions on the Bonding Site**

- Include all commerce transactions of the Web Store, plus those at other commercial web sites (e.g., chain store web site).

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21. **Web store transactions through the Bonding Site**

- The Web Store is a web site which optionally offers a Merchant Window, an Infomediary Window, and a Portal Window.

22. **Merchant Window functions through the Bonding Site**

- The Merchant Window is an option available on the Web Store. It is a customizable window that can be configured to complement or augment a sponsoring retail store's core business.

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23. Infomediary Window functions through the Bonding Site

- The Infomediary Window is an option that appears in the Web Store, that offers to a shopper one or more opportunities to make a commercial transaction through an intermediary profile broker, the Infomediary, based on the recorded needs, wants, preferences, or habits of the shopper.

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24. Portal Window functions through the Bonding Site

- The Portal Window offers to the shopper access to a number of Internet portal web sites.

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25. Communities functions on the Bonding Site

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- The Bonding Site is a community-building facilitator by virtue of the fact that ICE allows retail customers to determine for themselves how they entertain themselves while standing in the checkout line of the retail store, or while accessing the Bonding Site from a personal computer. For some people, entertainment means communicating with others with similar interests. The Bonding Site allows people to connect online in a virtual community with others that share a similar interest.

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- Virtual communities offer an opportunity for organizers to become community member profile brokers and/or to collaborate with Infomediaries.

26. Information functions to the Bonding Site

- Customers accessing the Bonding Site can get information about products (e.g., name, size, characteristics, qualities, etc.), about the sponsoring retail store (i.e., the retail store using the ICE system), about online communities, about promotions, about other web sites, and about Infomediaries.
- While the customer is waiting in the checkout line, she can be given surveys, shopping options, contest and sweepstakes applications. This would be a good time to offer the customer \$X savings, calculated over a year's time, for filling out a application form for a customer loyalty membership card and for using such a card.

15 27. Fantasy functions offered on the Bonding Site are:

- Multimedia entertainment channel with a multitude of programs, and
- Programming available to target multiple demographic and lifestyle segments and clusters.

20 28. Shopping Program

- The Shopping Program includes a collection of functions designed to help the shopper save time and money. The most important functions include Speed Shopping and money-saving promotions programs that are offered to retail shoppers.

25 29. Speed shopping through the SCC

- Any large store (e.g., grocery stores, Wal-Mart, OfficeMax, Kmart) that has difficult-to-find inventory will benefit from

speed shopping, because the program helps their customers find inventory products easily and quickly.

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- Each participating store submits to and maintains in the system a product catalog which is kept online and is accessible to the customer through the Merchant Window on the Bonding Site.
- The customer can specify a shopping list of products selected from a store catalog and downloaded to the customer's extranet private account.
- The customer can print out the shopping list on a standard printer. The printout will contain the shopping list the products the customer desires to purchase and a unique barcode.
- The unique barcode will tell ICE to download to an SCC in the store the items on the shopping list from the customer's extranet account when the barcode is scanned into the SCC.
- The customer can optionally access her customer extranet private account without using a barcode and, using an alternate form of identification, directly download into an SCC her shopping list.
- The program accesses the database containing the location in the store (i.e., aisle, shelf) where each product in the shopping list can be found and displays the store layout on the SCC screen using a graphics program.
- It indicates on the display where in the store a particular product is located (e.g., using a blinking indicator).
- The program indicates the route through the store the shopper should take to finish in the least amount of time.

30. A speed shopping maintenance subsystem comprises:

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- An in-store computer that would let the store manager define where products or inventory go on what aisles and shelves in the store.
- A program that allows graphic representation of store aisles, shelves, kiosks, and displays.
- A portable computer with a shelf stocking program that would tell a clerk where to stock the shelves of a store with a particular inventory item,
- The manager in the store inputs information that goes to the store's product catalog.
- As products are scanned at checkout, the system alerts the manager through a computer interface to restock the shelves.

31. Product promotion programs

- Product category promotions is a program designed to help product manufacturers compete in retail stores. It allows the manufacturers to purchase product category "slots" for a time period (e.g., 13 weeks) for promotions that appear on the shopping list screen of an SCC display. For example, a customer that has indicated on her shopping list that she intends to buy one brand of premium ice cream (e.g., say, Ben & Jerry's chocolate fudge) might see on the shopping list a promotional button displayed on her shopping list next to the ice cream specification. The button indicates that she can receive a special rebate if she will try Barbers ice cream instead of Ben & Jerry's. The exact promotions offered to an individual customer will depend on the customer profile that is stored in an ICE database.

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- Positional product promotions make use of the location or position sensor attached to the SCC. By correlating the location of a shopping cart within a store with the products on the shelves nearby, the program can display promotional flags and can sound audio alarms whenever the shopping cart is nearby a product which is being promoted. This program promotes cross selling and up selling to the customer.
- Recipe information buttons can be displayed next to product specifications on a shopping list. By pressing a recipe information button, a shopper can read about and see pictures of prepared recipe dishes that use one or more products on a customer shopping list. This promotion is designed to increase the purchases a customer makes in order to fill out a particular recipe. Promotion of cookbooks is a side benefit of this function.

32. Position Indicator Tag or Label

- Coded tags or labels are readable by the position sensor and are placed throughout the store to indicate a unique location in the store.

33. Product scanning in the Shopping Program

- The customer can scan the UPC barcode of products as they are placed in the shopping cart. A program will total the prices of the products in the basket for the benefit of the shopper. In this way, she can calculate what the final bill will be.

34. Product pricing in the Shopping Program

- If the customer is entitled to any rebate or discount upon the purchase of a given product, a program displays a signal whenever the product is scanned, or optionally, whenever the shopping cart is in the vicinity of the product.

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35. Calculator in the Shopping Program

- A calculator may be used on the screen of the SCC to calculate the total cost of products that the customer has scanned using the SCC barcode scanner.

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36. Receipt functions in ICE

- During a shopping session using the SCC, the customer accumulates a clickstream history, which is initially stored in the SCC and finally uploaded to an ICE database at the end of the shopping session.
- At the checkout, the customer receives a printed receipt with standard price information regarding the purchase. Optionally included on the receipt, or alternatively, on a separate slip of paper, are one or more promotions printed in ASCII directing the customer to take an action.
- Optionally printed on the receipt or printout is a barcode that, when read using a special browser on a computer equipped with a digital camera, can access a version of the Bonding Site specially configured to the profile of that customer.
- The promotions can be targeted to the individual customer based on current or past history that is stored in the customer's profile record.

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37. Barcode functions printed on receipt

- Barcodes on the receipt are used to identify a customer's preferences in Bonding Site programming.
- Barcodes are also used to customize the Bonding Site configuration and appearance based on the profile of the customer.

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38. Special Promotions using the SCC

- The profiling of customer interests allows hobby- or interest-specific contests.
- Contest results could be time-sensitive. For example, a customer can get a promotional message, "Check this site before Saturday to see if you have won the contest."
- Contest results could be delivered only on the SCC. This would force a shopper to return to a retail store to find out the contest results.

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39. Messages displayed on the SCC, printed on receipts, or viewed on the Bonding Site from a personal computer can include promotions of:

- Any type of television, multimedia, or interactive entertainment or educational programming, indicated by displaying the URL of a media site or a television or other media channel, or by making available a hyperlink that accesses such programming,
- Home delivery, online ordering or purchasing opportunities,
- A telephone number with a promotional caption,
- Any type of commodity that can be consumed, used, or enjoyed by the customer,
- The results of a shopping session (e.g., items purchased, special discounts earned, promotional points in customer's account, etc.),

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- A reminder promotion to visit the Bonding Site later from a personal computer, and
- Targeted advertisements based on the customer's profile.

5           40. SCC self-addressed reminder email promotional message

- When the customer is in the store using the SCC, one or more permission marketing programs can offer benefits to the customer. If the customer elects to accept an offer, she will have to the option of sending an email reminder of the offer to her personal email address. Such an email message can contain at least one embedded hyperlink.

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15           41. Send email marketing promotion to a friend

- When the customer is in the store using the SCC or accessing the Bonding Site from a personal computer, she will have to the option of sending an email recommendation of a promotion to a personal acquaintance. Such an email message can contain at least one embedded hyperlink.
- The customer can optionally receive a benefit as a reward.

20           42. Customer extranet personal account functions

- Allows the customer to keep a record of purchases made in one or more stores.
- Allows the customer to maintain her own personal profile including her own shopping and lifestyle preferences, tastes, desires, and habits. The profile record of the customer also includes demographic information.

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43. Personal buying profile for a given store

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- For a particular store (e.g., a grocery store) where a customer makes frequent shopping trips, the customer can maintain a personal account on an extranet.
- She may download a shopping list from a store online catalog into her extranet account.
- Over time, the customer can maintain a personal shopping history of products bought and when they were bought.
- The customer can download a shopping list from her extranet personal account to an SCC in a store, after properly identifying herself.

44. Personal entertainment profile functions in ICE

- A customer that has established a list of preferred entertainment channels or web sites accessible through the Bonding Site can set up one or more preferred configurations of a Bonding Site homepage. Such configurations can have customized linkages that would allow a customer to simply click on a link go to his favorite television or entertainment channel that would be viewable on a television with a set-top box, or on a similar machine.

45. Personal interest links to various web sites and media channels

- A customer with a particular personal interest (e.g., say, women's soccer) will be able to maintain a favorites list of hyperlinks to women's soccer web sites and media channels, including television programs featuring soccer matches.

46. Community Manager

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- A customer that has established a list of preferred virtual communities or web sites accessible through the Bonding Site can set up one or more preferred configurations of a Bonding Site homepage on the customer extranet personal account. Such configurations would have customized linkages to community or other web sites.

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47. Reminder Service available on the customer extranet

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- A reminder service allows the customer to keep a personal database of what she needs and when she needs it. An email message can be sent to the customer while she is visiting the store using the SCC, or when she's using a personal computer. The message can remind her to make a purchase or to carry out an action. Such an email message can contain at least one embedded hyperlink.

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48. Ordering service available on the customer extranet

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- The customer can use an online catalog from a retail store SCC that allows for her to specify products from the catalog and create a personal shopping list that is kept in her personal account in the customer extranet.
- The customer can order online directly from the store and have the products delivered to a shipping address.
- The customer can order a commodity using an SCC from a third-party Fulfillment House. The commodity can optionally be delivered to a specified shipping address.

49. Profile system within Magnet

- Personal profiles can comprise demographic, lifestyle, occupational, buying history, or other indicators.
- Store profiles can comprise store location, customer profiles, product profiles, industry profiles, or other indicators.
- Product profiles can comprise descriptive information (e.g., name, size, color, weight, etc.), warranty information (e.g., guarantees, duration, etc.), and background information (e.g., operating instructions, special uses, unique characteristics, manufacturing specifications, environmental concerns, etc.).

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50. The profile management system can comprise:

- Allowing the customer to modify some or all of her personal profile,
- Optionally allowing the customer to maintain her personal profile on her own personal computer,
- Giving the customer the ability to release all or parts of her personal profile to a business in order to transact commerce with the business.

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51. Market research using the Magnet

- ICE allows market research using email split testing to build customer profiles.
- ICE allows market research using SCC promotion split testing to promote web sites, email services, IVR promotions,
- ICE allows market research using SCC promotion split testing to test time-sensitive date-stamped contests, points reporting, local online community groups, and
- ICE allows market research using SCC promotion split testing to test any type of commodity, including media programming.

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- ICE could provide market feedback to the ICE stakeholders by means of daily customer email discussion groups in one or more newsletters that could be mined for feedback market research.

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52. Communities function as an integral business component of ICE by:

- Providing an attraction to retail store customers that will lead them to find like-minded individuals as themselves with similar interests in virtual communities.
- Providing a forum that will serve advertisers by identifying the profiles of community members that can be brokered using Infomediaries.

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53. Communities for special interests of customers

- Customer hot-button interests will be motivators for customers to visit virtual communities related to the interests.
- A customer with a hobby can keep favorite hyperlinks related to her hobby listed in her personal extranet account.

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54. Communities for utilitarian interests of customers

- Customer utilitarian interests will be motivators for customers to visit virtual communities related to the interests.
- A customer can keep utilitarian-interest hyperlinks related to administration of personal business, family, or work affairs on her personal extranet account.

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55. Framework functions in ICE

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- The Framework functions as an electronic marketplace whereby horizontal and vertical hubs serve the retail merchants.
- Horizontal hubs are populated by supplier companies (e.g., in the payroll and accounting, advertising, public relations, customer relationship management, financial services fields) that serves businesses horizontally across industries.
- Vertical hubs are populated by supplier companies (e.g., wholesalers, distributors, and manufactures in a given industrial sector) that serves businesses vertically within an industry.
- The Framework electronic marketplace also allows companies in the horizontal hub to do business with companies in the vertical hub. It also allows, encourages, and promotes business between suppliers from horizontal and vertical hubs to do business online with retail merchants.

56. Retail Merchant extranet functions in the Framework

- The merchant can check periodically in a private extranet account to monitor Bonding Site and Shopping Program customer activity produced by his retail store.
- In addition, the merchant has access to industry-related communities, information, as well as the Framework electronic marketplace. The merchant can use this marketplace to deal directly and transact business online with his suppliers.

57. Monitoring functions on the merchant extranet of customer activity on Bonding Site

- The merchant visiting his extranet private account can monitor customer activity in his store related to ICE, including customer profile breakdowns, merchant window shopping

results, catalog uses statistics, and customer survey results statistics.

58. Industry news functions on the merchant extranet

- 5 • The merchant will be able to find out industry-related news. Such news could be syndicated from trade publications.

59. Manager community functions on the merchant extranet

- 10 • There will be virtual communities comprising managers and business owners in a number of categories (e.g., human resource managers for grocery chains, purchasing managers for department stores, store managers for toy stores). These communities will be accessible on merchant extranets.

15 60. Supplier offerings on the Framework, accessible through the merchant extranet:

- 20 • Suppliers will make available on the Framework product catalogs which will be accessible on the merchant extranet. In this way, retail merchants will be able to browse through the catalogs of their suppliers.
- Suppliers will offer through the Framework all the information necessary for their potential customers to decide to make a purchase.

25 61. Transact commerce with the supplier on the Framework, accessible through the merchant extranet:

- The retail merchant will be able to buy commodities and otherwise get valuable information from suppliers through the

Framework. The Merchant Extranet will be the interface the merchant uses to access the Framework.

62. Manager incentives, promotions, games functions on the merchant extranet:

- Managers for a retail store can be personally offered incentives, games, and promotions in order to enhance the enjoyment they receive by visiting the merchant extranet private account monitoring site.

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63. Extranet of other commercial stakeholders (e.g., suppliers in the vertical and horizontal hubs) in the Framework:

- Extranets to suppliers provide an interface to the Framework, allowing suppliers to enjoy the benefits therein.
- The extranets give suppliers the opportunity to receive key information regarding the retail merchants that are their potential or actual customers.
- The extranet gives suppliers a channel to send marketing messages to and to conduct commercial transactions with retail merchants and other suppliers by accessing the Framework.

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64. Retail merchant activity on private pages of the merchant extranet, reported on suppliers' extranets

- A supplier visiting his own supplier (e.g., wholesaler or manufacturer) extranet private account can monitor certain of his customers' (e.g., retail merchants') activities in accessing their own merchant extranet private accounts (e.g., the profiles of the advertisements a particular manager clicks on, the advertisements that get the highest response).

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65. Industry news on suppliers' extranets

- The supplier will be able to find out industry-related news through his own private extranet account. Such news can be syndicated from trade publications.

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66. Manager community on stakeholders extranet

- There will be virtual communities comprising supplier managers in a number of categories (e.g., district managers for food distributors, purchasing managers for petroleum jobbers, production managers in toy factories). These communities will be accessible on supplier extranets.

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67. The offerings from other suppliers on a supplier's extranet account page:

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- Suppliers will make available on the Framework product catalogs which will be accessible to other suppliers through suppliers' extranet. In this way, suppliers will be able to browse through the catalogs of other suppliers.
- Suppliers will offer through the Framework all the information necessary for their potential customers to decide to make a purchase.

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68. Transact commerce functions of the supplier offerings on the stakeholder extranet

- The supplier will be able to buy commodities and otherwise get valuable information from other suppliers through the Framework. The supplier extranet will be interface the supplier uses to access the Framework.

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69. Supply chain manager incentives, promotions, games on supplier extranet:

- Managers for a supplier can be personally offered incentives, games, and promotions in order to enhance the enjoyment they receive by visiting the supplier extranet private account page.

### **6.1 Operation of the PUMP**

10 Though the method of enhancing electronic commerce of the instant invention can be implemented in a myriad of ways, the following details an embodiment which may be practiced by execution of one or more of the following steps, starting with interaction with one or more Fulfillment Houses.

1. The PUMP operator first recruits a Fulfillment House in order to sell products or services to the customers of the retail merchants attracted to using PUMP.
- 15 2. It is appropriate to build a database for the Fulfillment House. The database contains information on the products and services available for sale through the Fulfillment House. This product and service information includes graphics, sound, video, text and pictures relating to quality, cost, and features.
- 20 3. In addition to product and service information, there is an auxiliary information package in the database that the Fulfillment House may provide. This auxiliary information package is designed to support the merchant and the end customer. It contains such items as product-specific operating instructions, assembly instructions, tips related to the products and their use, and so on.
- 25 4. For each Fulfillment House, products are grouped according to formats preferred by merchants. In other words, merchants are able to choose the inventory for Web Store sales to avoid competition with their in-store inventory, if they choose. For example, a pharmacy that does not sell blood-pressure-measuring machines in-store may want to sell them online, whereas a

second pharmacy may sell them in-store and would not want the online competition. Product groupings and auxiliary information are chosen based on marketing research. For example, a small optical shop may choose to offer accessory products (e.g., hats, designer tee shirts) through its Web Store that complement its brick-and-mortar products.

5. Auxiliary information packages are chosen based on the retail merchant's Web Store inventory and on his marketing strategy. Third party content providers (e.g., how-to book publishers) can be contracted to obtain information content.
- 10 6. One or more Fulfillment Houses are chosen that can fill and deliver orders to a customer on behalf of the merchant.
7. Agreement is reached with chosen Fulfillment Houses regarding fulfillment standards and contracts.
8. The PUMP operator allocates the technical infrastructure (standard modems,
- 15 standard servers, standard networks, standard computers, standard databases, hardware, software, humans, etc.) scaled to accommodate projected performance demands according to anticipated customer throughput.

Next, retail merchants are attracted to SAMIS to consider the benefits offered  
20 by the PUMP operator.

9. The PUMP operator promotes SAMIS to various segments of the retail industry (e.g., pet, optical, convenience, or virtually any other kind of retail store), using a combination of means including such options as advertising, in-store promotions, public relations, and Web Store promotions.
- 25 10. Once a prospective merchant visits the SAMIS web site, he or she sees an introductory paragraph, (e.g., "Welcome! Now you can improve your bottom line without risk or inventory investment. Merchants are making hundreds of extra dollars in each store every month by selling Products and Services On the Net! How would you like to do the same?" ).

11. A merchant that logs onto SAMIS is offered options. For example, he or she can click on buttons with the following captions:
- a. "Offer to sell your customers auxiliary products and services at our web site that will complement what you sell in your store."
  - 5 b. "Calculate the theoretical profits to your store by inputting some of your information."
  - c. "Support your customers after the sale with online training and services to help them enjoy the products they buy in your store."
  - d. "See how your store can get more traffic and extra advertising through our program."
  - 10 e. "AI would like to receive more information."
  - f. "AI would like to speak to a customer service representative."
  - g. "AI would like to email you to comment or ask questions."
  - h. "Yes, I'm interested in making more money. How do I sign up?"
- 15 The merchant also is given the opportunity to sample the same experience that the customer logging on to the Web Store will have.
12. SAMIS can ask the merchant to choose one or more commercial categories representing his business. Exemplary categories can comprise one or more of the following:
- |    |                          |    |                      |
|----|--------------------------|----|----------------------|
| 20 | • Animal hospitals       | 30 | • Blinds             |
|    | • Antiques               |    | • Boats              |
|    | • Appliance              |    | • Building Supplies  |
|    | • Aquariums              |    | • Brides             |
|    | • Art Galleries          |    | • Camping equipment  |
| 25 | • Audio-visual equipment | 35 | • Carpeting          |
|    | • Automobiles            |    | • Cellular phones    |
|    | • Beauty                 |    | • Child care service |
|    | • Bedding                |    | • Church Supplies    |
|    | • Beepers                |    | • Cleaners           |

- Clothing
- Collectibles 30 • Golf services
- Computers
- Convenience store
- Cosmetic products 35 • Grocery stores
- Cosmetic services
- Delicatessens • Guns
- Dentists • Hair products
- Discount stores • Hair services
- 10 • Dolls and accessories • Hardware
- Drugstores • Health clubs
- Electric equipment 40 • Hearing aids
- Electronic devices
- Embossing • Herbs
- 15 • Factory outlets • Hobby and model shops
- Fertilizers
- Financing 45 • Home furnishings
- First aid supplies
- Food and beverage • Home improvements
- Fuel • Hotels and motels
- 20 • Funeral • Housing
- Furniture 50 • Housewares
- Games
- Garden centers • Insurance
- 25 • Gas equipment • Investment securities
- Gems
- Gift shops 55 • Iron work
- Golf products • Jewelers
- Kennels
- Keys
- Kitchen cabinets
- Kitchen equipment
- Lamps and shades
- Laundries
- Legal clinics
- Lighting products
- Liquor stores

- Luggage
- Lumber
- Magazines
- Maps
- 5 • Marinas
- Meat
- Mobile homes
- Money order service
- Motor homes
- 10 • Motors
- Musical instruments
- Nail salons and services
- Nanny service
- Newspapers
- 15 • Nurseries for plants, trees, etc.
- Nursing homes
- Office furniture and equipment
- Office supplies
- Oil products
- 20 • Opticians
- Optical supplies
- Outplacement services
- Paint and paint supplies
- Paper products
- 25 • Party supplies
- Pawnbrokers
- Pet supplies
- Photographic products and services
- Physical therapy products and services
- Picture frames
- Pizzas
- Plants
- Pottery
- Printers
- Psychologists
- Race tracks
- Real estate
- Resorts
- Restaurants
- Sales training
- Sandwiches
- Schools
- School supplies
- Seafood
- Security products and services
- Shipping
- Signs
- Sod and sodding service
- Sporting Goods
- Sound products and services
- Sports products and services
- Stock and bond brokers
- 55 • Stone products

- Tanning salons 10 • Vehicles
  - Tires • Video products and services
  - Tools • Vitamins and food supplements
  - Toys • Watches
  - 5 • Trailers • Weddings
  - Uniforms 15 • Wheelchairs
  - Variety stores • Window
  - Veterinary products and services
13. The merchant can input enough parameters about his store for SAMIS to show examples online of how similar merchants in his business class are benefiting from using PUMP.
- 20
14. The merchant can calculate the theoretical profits to his store by answering the following or similar questions regarding his store's profile:
- a. Gather information based on street traffic
    - 25 • a four-lane highway
    - two-lane road
  - b. Population density (the zip code can provide general information as to whether the store is in a city or in a rural area)
  - c. Type of store
    - 30 • Transient
    - neighborhood
  - d. Store traffic
    - number of customers/ 24-hr day
  - e. Ethnic breakdown of customers
    - 35 • Hispanic

- Black
  - White
  - Asiatic
  - Native American
  - Other
- 5 f. Square feet of sales area in store, and
- g. Choices, such as desired product mix to sell online.
15. The merchant can choose accessory information and products to promote  
10 that will complement his in-store products. For example, a pet store or a  
veterinary office might choose to make available a package of information  
containing
- a. nutrition and health tips for pets,
  - b. grooming and training tips and exercises for pet owners to use with  
15 pets,
  - c. articles from pet magazines, and
  - d. articles from past newsletters produced by The Vet, etc.

- In addition, the site optionally sells:
- 20 a. nutritional products for pets,  
b. books for pet owners, and/or  
c. grooming accessories, etc.

- If the merchant wishes to see what the customer experiences using PUMP, he  
25 is able to
- 16. Pull up a version of the Web Store Home Page configured to the merchant's requirements,
  - 17. Make a simulated or real purchase of a product or service on the Web Store Merchant Window,
  - 30 18. Receive an email receipt of purchase, and

19. Watch an animated graphic or video clip showing how the order goes to the Fulfillment House, and how the order is filled and delivered.

The retail merchant is able to effectively and efficiently sell products through multiple retail stores using PUMP. Installation and operation of the service involve the following steps:

20. After the retail merchant is convinced of the benefits and agrees to use PUMP, the PUMP operator sets up the retail merchant with the necessary equipment configuration, including a standard barcode scanner, a standard credit-card-type terminal, and a standard printer.
21. Signage and displays are optionally set up in the retail store.
22. Store personnel are trained to explain PUMP to customers and to use proper procedure in ringing up PUMP sales.
23. At least once and/or substantially every time a sale is made at the checkout, the sales clerk scans the UPC barcode of each product, and the Customer Card (e.g., check cashing, discount, credit, debit, or smart), if available.
24. When designated products and services are sold which are to be delivered by a third party Fulfillment House, the electronic standard credit-card-type of terminal sends the order information to the Order Processing Server through a telephone or other type of connection.
25. The standard credit-card-type of terminal sends the customer ID and product selection information to PUMP.
26. PUMP sends back the code for what promotion to print out.
27. The customer pays and receives the sales receipt. The PUMP point-of-sale standard printer optionally prints the promotion on the receipt itself or otherwise is printed on a separate slip of paper.
28. As each order comes into the Order Processing Server, relevant data are recorded in the Fulfillment House Database, the Customer Database, and in the Merchant Database.

29. For accounting purposes, the shift manager of each store can optionally request that a standard fax summarizing PUMP shift sales be sent at the time of request to the store by keying a code into the standard credit-card terminal.
  30. A store manager optionally can periodically check his sales and other accounting figures on a per time period basis (e.g., by week, by month, etc.) by logging on to a password-protected account on the merchant Extranet.
  31. A store manager optionally can receive targeted special marketing offers from a vendor or wholesaler through the password-protected account screen, and may reply to the offer to receive more information.
- 10
- The retail customer benefits from the use of PUMP by learning how to acquire information, products, and services conveniently, generally as outlined below:
32. The customer in a retail store decides to buy a product (say, a six-pack of beer), takes it to the checkout, and pays.
  - 15 33. The receipt she gets has a promotion of a benefit (e.g., specialty-imported beers) on it with an invitation to visit the Web Store.
  34. If the retail store also offers electronic ordering of products or services that are deliverable by a third-party Fulfillment House, the customer can also order airtime for her cellular phone.
  - 20 35. She again pays the clerk, who inputs into a standard credit-card-type terminal information which can include product code, amount paid, customer identification number, and personal customer information.
  36. The terminal is connected to a standard printer, which again prints a sales receipt for the customer. The printing on the receipt optionally promotes special rates on cellular airtime to recharge at the Web Store.
  - 25 37. The standard credit-card-type of terminal electronically sends the order information to an Order Processor that records the information. The Order Processor then sends the customer order with relevant data to a Fulfillment House by means of a Fulfillment House Extranet.
  - 30 38. The Fulfillment House fills the order, and delivers it to the customer.

- When the customer chooses to reorder the product or service (e.g., if it is a consumable product that needs replenishing, as in the example of cellular airtime above), or orders another product or service, she can do so by one or a combination 5 of the following:
39. She can return to the store and repeat steps 34 through 38 above, or other comparable steps, and/or
  40. She can refer to the Web Store's URL, which was promoted in the store on signage, displays, and packaging, as well as on the sales receipt from the first 10 sale. She can then visit the Web Store's web address to order the type and quantity of product, and pay by credit card or other commercially acceptable means.
  - 15 41. The Web Store then electronically sends the order data to an Order Processor that records the information. The Order Processor then sends the customer's order with relevant data to a Fulfillment House by means of a Fulfillment House Extranet.
  42. The Fulfillment House fills the order, delivers it to the customer, and notifies the Order Processing Server by means of the Fulfillment House Extranet.
  - 15 43. The customer optionally can track her product delivery and/or account status by accessing a proprietary, password-protected account on a Customer Extranet.

There are several possible steps in the way that a Fulfillment House can work with PUMP, for example:

- 25 44. A Fulfillment House receives an order with payment and shipping or delivery information from the Fulfillment House Extranet.
45. The Fulfillment House fills the order and delivers the product to the customer.

46. The Fulfillment House sends the Fulfillment House Database Server feedback regarding order filling, shipping, and delivery through the Fulfillment House Extranet.
47. The Fulfillment House server sends product fulfillment data to the Merchant and Customer Databases.  
5

An Internet portal company can be involved in PUMP by functioning in ways such as the following:

48. The PUMP operator contracts with the Internet portal company that is interested in attracting portal traffic. The portal company provides the Portal Window on the Web Store home page with the appropriate dynamic hyperlinks and other features according to specified standards.  
10
49. The Portal Window offers a secondary attraction to retail customers that initially visit the Web Store for the products that the retail merchant promotes in the Merchant Window on the Web Store home page. For example, the secondary attraction optionally can include additional purchase opportunities, information, entertainment, and interaction (e.g., chat rooms) with other visitors, all of which are available through the Portal Home Page.  
15

20 Wholesalers and other vendors (including manufacturers) can benefit from PUMP by taking steps such as the following:

50. The PUMP operator promotes SAMIS to various segments of the wholesale and manufacturing industry, using a combination of means including advertising and public relations.  
25
51. Wholesalers and manufacturers can use SAMIS to input their own business parameters and to simulate the theoretical results. For example, input parameters for a snack food jobber servicing convenience stores in a specific geographic area optionally can include:
  - A. Warehouse location,
  - 30 B. Category and description of products sold, and

C. Delivery schedule and capacity of trucks.

In one exemplary embodiment, the simulator optionally shows:

- D. A map of known potential and/or actual customers within the specified area,
  - E. Optimized delivery schedules and routes for the jobber's trucks, and
  - F. Customer profiles broken down into categories matched to the jobber's optimal business strategy.
5. The PUMP operator contacts wholesalers and vendors selling in specified industries (e.g., convenience and grocery stores), and offers them targeted access to highly focused markets using a proprietary communications channel (e.g., Extranet merchants' account screens).
10. The wholesaler/vendor specifies desired information (market parameters) relating to customer profiles and/or area demographics, etc. (e.g., the number of independently owned convenience stores within a 100-mile radius of a warehouse), to the wholesaler/vendor database.
15. In response, the wholesaler/vendor receives intelligence reports on the specified market parameters from the Wholesaler or Vendor Database. In addition, vendors and wholesalers also optionally can extract data about retail merchants and/or end consumers from a Merchant Database and/or a Customer Database.
20. The wholesaler/vendor optionally can target special offers to markets defined from data gained from the Wholesaler/Vendor Databases, and/or from any other applicable databases. The special offers optionally can communicate promotional messages to retail merchants on the merchants' accounting screens, or to end consumers on private customer account screens.
25. Access to retail stores may be by different categories of merchant. Examples of categories include TYPE OF STORE = Convenience Store, LOCATION = Boston, and SIZE = 1400 sq. ft., etc.

Note: Herein, wholesalers are defined slightly differently from vendors. Wholesalers are regular suppliers of retail merchants. An example is that of a company that makes regularly scheduled bread deliveries to a chain of convenience stores.

5 In contrast, vendors are not necessarily regular suppliers, but in many cases can be a one-time source for a product or service. An example is the gasoline pump distributor that sells a set of pumps to a convenience store owner. Vendors can also be manufacturers.

Further note: The term commodity(ies) is used herein as a term that includes a  
10 good(s) and/or a service(s).

Note: In this invention description, a number of clarifications are made:

- The term "Supplier" includes manufacturer, distributor, wholesaler, jobber, service supplier, or fulfillment house.
- "ICE Operator (ICEOP)" includes PUMP Operator.
- 15 • "Vendors" includes suppliers from vertical and horizontal hubs.  
"Store" includes a non-retail business.

## **6.2 Conclusion, Ramifications, and Scope**

It should be clear that the concept of PUMP embodies a synergistic  
20 process that adds value to every link in a commercial chain - from retail customer, to retail merchant, to Internet portal company, to wholesale company, to the Fulfillment House, and finally to the vendor that supplies retail and wholesale merchants and end consumers.

In particular, PUMP offers a new approach over traditional methods of  
25 marketing in several ways:

1. PUMP permits, fosters, and encourages retail merchants to gain an additional revenue source through promotion of a web site.
2. PUMP permits, fosters, and encourages mini-billboard promotion of a web site.

3. PUMP permits, fosters, and encourages a Fulfillment House magnet approach to drawing visitors to an Internet portal.
4. PUMP permits, fosters, and encourages use of proprietary retail merchant accounts on a merchant Extranet to provide a marketing channel to wholesalers and vendors.
5. PUMP permits, fosters, and encourages use of proprietary customer accounts on a customer Extranet to provide a marketing channel to vendors.
6. PUMP serves as an intermediary agent between the various participating data users. Databases are used to maintain profiles on the various PUMP data users, and to deliver reports to other paying users.

Implementation of PUMP is via commercially available software programs, and commercially available hardware and connections. Furthermore, in general concept PUMP contemplates future generations of software, hardware, and connection means. Finally, it should be noted that connection means between PUMP components include radio waves and all other electromagnetic wavelengths suitable (present or future) for such communication, and also include relay technology, such as satellite technology.

The description above contains many embodiments. However, these should not be construed as limitations on the scope of the invention; rather, they should be interpreted as merely providing illustrations of some of the presently preferred embodiments of this invention. For example:

1. If the Web Store is not promoted in a retail business by means of a Point-Of-Sale (POS) printout, the Web Store may still be promoted by any of various in-store promotions, including signage, displays, and packaging.
2. The three windows of the Web Store (i.e., the Merchant, the Portal, and the Infomediary Windows), as well as the functionality implied therein, may appear or not appear on the Web Store Home Page in any combination at any point during the lifecycle of the PUMP Business System.

3. The lifecycle of the PUMP Business System can appear in a different embodiment from the one described above.

### **6.3 Additional Notes**

5 According to one embodiment, the present invention is a method of using an electronic network that interconnects a plurality of commodity purchasers with at least one commodity provider to enhance commerce. As such, the present invention includes in a broad aspect the steps of collecting at least one of profile information and identification information on at least one customer of a bricks-and-mortar  
10 business to build a profile information database on said at least one customer, generating at least one first profile-based promotional message and at least one second profile-based promotional message based on said profile information data base, distributing said at least one first profile-based promotional message to said at least one customer to attract said at least one customer to at least one Internet Uniform  
15 Resource Locator (URL), and distributing said at least one second profile-based promotional message to said at least one customer to attract said at least one customer to return to said bricks-and-mortar business. The customer or prospective customer may be a retail customer and/or a commercial customer.

Practice of the instant invention includes the steps of distributing the at least  
20 one first and second profile-based promotional messages so that they each include distributing a promotional message, wherein the promotional message is communicated by at least one of a means for distributing a message electronically, a means for distributing a message aurally, a means for distributing a message kinesthetically, a means for distributing a message optically, and a means for  
25 distributing a message olfactorily.

Also, practice of the present invention includes distributing the first and second profile-based messages by an electronic distribution means, wherein the electronic distribution means includes at least one of a wireless distribution means and a hardwired distribution means.

30 Practice of the present invention also encompasses an embodiment in which a

computer system is coupled to an electronic network so as to interconnects a plurality of commodity purchasers with at least one commodity provider to enhance commerce. Such a computer system typically comprises a processor, a memory storage device storing a sequence of instructions to be executed by the processor, an output device, and at least one input device that is configured to collect at least one of profile information and identification information on a customer of a bricks-and-mortar business to build a profile information database on the customer, wherein, when executed by the processor, the sequence of instructions causes the processor to receive, from the profile information database, profile information on the customer, 5 generate at least one first profile-based promotional message, and at least one second profile-based promotional message, and send the at least one first and second promotional messages to the output device. In turn, the output device distributes the at least one first profile-based promotional message to the customer to attract the customer to at least one Internet Uniform Resource Locator (URL), and distributes 10 the at least one second profile-based promotional message to the customer to attract him to the bricks-and-mortar business. As in the previous embodiment, the customer can be a retail customer or a commercial customer. Also as in the previous embodiment, the at least one input device collects profile information on the at least one customer based on at least one of: commodity purchase behavior, clickstream 15 behavior, and data input behavior of the at least one customer; and includes at least one of a keyboard configured to identify the at least one customer based on profile information and identification information input therein, a reader configured to identify the at least one customer based on profile information and identification information input therein, and a biometrics recognition system that is configured to 20 identify the at least one customer based on at least one unique body characteristic. Again, the biometrics recognition system is configured to identify the at least one customer, and such identification can be based on at least one of: a retina scan, a voice print, a finger print, a thumb print, a toe print, a foot print, a hand print, and a DNA print, to cite some non-limiting examples.

25 Another aspect of this embodiment constitutes a computer system that is 30

configured to design the first and second profile-based messages to cause the customer to reveal his identity, for example, by offering a promotion, reward, or the like, in exchange for revelation of his identity.

Yet another aspect of this embodiment constitutes a computer system that is  
5 configured to use the profile information database to determine patterns of want,  
interest, preference, habit, and purchase behavior of the customer, and to customize  
the at least one first and second profile-based promotional messages based on those  
patterns of want, interest, preference, habit, and purchase behavior.

The output device of the computer system according to the present invention  
10 distributes the at least one first profile-based promotional message, and includes at  
least one of information about a commodity, and an advertisement, discount, or  
coupon relating to a commodity, that is available from the at least one Internet URL.  
Furthermore, the output device distributes the at least one second profile-based  
15 promotional message, and includes at least one of an advertisement, a discount, and a  
coupon relating to a commodity that is available from the bricks-and-mortar  
business, wherein the at least one second profile-based promotional message is  
distributed during at least one of a shopping session in, and a check-out from, the  
bricks-and-mortar business. The at least one first and at least one second profile-  
based promotional messages each typically promote at least one of the bricks-and-  
20 mortar business, a web site of said bricks-and-mortar business, a web site of a  
business that is affiliated with said bricks-and-mortar business, a bonding site, a  
product, a product line, a commodity provider, a commodity producer, and a  
merchandiser.

The computer system's output device typically distributes the at least one first  
25 and at least one second profile-based promotional messages by communicating by at  
least one of a means for distributing a message electronically, a means for distributing  
a message aurally, a means for distributing a message kinesthetically, a means for  
distributing a message optically, and a means for distributing a message olfactorily.  
The output device of the computer system typically distributes the promotional  
30 messages by an electronic distribution means, which may be at least one of a wireless

distribution means and a hardwired distribution means, to cite two non-limiting examples.

The input device of the computer system according to practice of the present invention is configured to generate a customer identification number that is unique to  
5 the at least one customer, and to logically connect the unique customer identification number to use, by the at least one customer, of a device that is linked to the electronic network. This input device is also typically configured to collect profile information on the at least one customer at each instance that: 1) the customer exhibits at least one of commodity purchase behavior, clickstream behavior, and data  
10 input behavior, and 2) this behavior is logically connected to the unique customer identification number assigned to the customer.

The profile information database of the present computer system enables the processor to generate profile-based promotional messages that are closely customized to at least one of: a need, a want, an interest, a preference, a habit, and a purchase  
15 behavior of the at least one customer, and the profile-based promotional messages are designed to encourage the at least one customer to further use at least one of the bricks-and mortar business, a web site of said bricks-and-mortar business, a web site of said business that is affiliated with the bricks-and-mortar business, a bonding site, a product, a product line, a commodity provider, a commodity producer, and a  
20 merchandiser.

The computer system, according to practice of the present invention, is configured to include a customer recognition system, wherein the customer recognition system is configured to obtain identification information on the at least one customer from input based on at least one of the following that is logically  
25 connected to the unique customer identification number associated with the at least one customer: at least one biometric datum or set of data that is readable by said biometrics recognition system pertaining to the at least one customer, a social security number, the unique customer identification number, a password, an e-mail message, a cookie pertaining to Internet use by or on behalf of said at least one customer, an  
30 account number, a customer account number, a customer card number, a customer

loyalty card number, a bank account number, a driver=s license number, a diner=s card number, a membership number, a promotional card or a promotional number , a bonus card or a bonus number that pertains to the at least one customer, and a set of at least one character that is readable by said reader and that pertains to the at least 5 one customer, to cite a few non-limiting examples.

The computer system according to practice of the present invention also typically is configured with a bonding site, wherein the sequence of instructions causes the output device to promote the bonding site to the at least one customer by distributing the at least one first profile-based promotional message.

10 The computer system according to the present invention also is configured with a shopping cart computer system for use in said bricks-and-mortar business, wherein the shopping cart computer system comprises shopping cart hardware, comprising a shopping cart processor; shopping cart software implemented on the shopping cart hardware, and comprising a shopping cart memory storage device; an 15 input device comprising a customer recognition system that is coupled to the shopping cart hardware and to said shopping cart software, and where the customer recognition system is configured to identify a customer; a shopping cart output device that is connected to the process by at least one of a wireless connection, and a hardwired connection, and wherein the system output device is configured to 20 communicate the to said computer system, the first profile-based promotional message and the second profile-based promotional messages to the shopping cart output device by the at least one of the wireless connection and the hardwired connection.

25 The computer system according to the present invention, including the shopping cart software, is also typically configured with a catalog of commodities that are available from at least one of a web site of said bricks-and-mortar business, a bricks-and-mortar business, a web site of a business that is affiliated with the bricks-and-mortar business, a bonding site, a commodity provider, a commodity producer, and a merchandiser. The catalog may be customized to the at least one customer, 30 due to configuration of the shopping cart software, and based on information stored

in the profile information database. Furthermore, the catalog of commodities is updated based on at least one of data input behavior, commodity purchase behavior, and clickstream behavior of the customer.

In yet another embodiment, the present invention includes a computer-readable medium having stored thereon a sequence of instructions which, when executed by a processor, cause the processor to perform the steps of: collecting at least one of profile information and identification information to build a profile information data base on at least one customer of a bricks-and-mortar business; generating at least one first profile-based promotional message and at least one second profile-based promotional message based on the profile information data base; distributing the at least one first profile-based promotional message to the at least one customer to attract the at least one customer to at least one Internet Uniform Resource Locator (URL); and distributing the at least one second profile-based promotional message to the at least one customer to attract the at least one customer to return to the bricks-and-mortar business.

As in earlier above embodiments, the computer-readable medium according to the present invention may include at least one customer that is a retail customer and/or a commercial customer.

In another embodiment, the present invention constitutes a system for integrating electronic commerce-based businesses with bricks-and-mortar-based businesses to enhance commerce, including an electronic network that interconnects a plurality of commodity purchasers with at least one commodity provider; a processor connected to the electronic network; an output device connected to the processor; a memory storage device storing a sequence of instructions to be executed by said processor; and at least one input device that is coupled to the processor and that is configured to collect at least one of profile information and identification information on at least one customer of a bricks-and-mortar business to build a profile information database on the at least one customer, wherein, when executed by the processor, the sequence of instructions causes the processor to: receive, from the profile information database, profile information on the at least one customer,

generate at least one first profile-based promotional message and at least one second profile-based promotional message, and send the at least one first promotional message and the at least one second promotional message to the output device. Furthermore, the output device is configured to distribute the at least one first profile-based promotional message to the at least one customer to attract the at least one customer to at least one Internet Uniform Resource Locator (URL); and distribute the at least one second profile-based promotional message to the at least one customer to attract the at least one customer to return to the bricks-and-mortar business. Again, the at least one customer may be a retail customer and/or a commercial customer.

The present invention also encompasses an embodiment that constitutes a method of using an electronic network that interconnects a plurality of commodity purchasers with at least one commodity provider to enhance commerce, including means for collecting at least one of profile information and identification information on at least one customer of a bricks-and-mortar business to build a profile information database on the at least one customer; means for generating at least one first profile-based promotional message and at least one second profile-based promotional message based on the profile information data base; means for distributing the at least one first profile-based promotional message to the at least one customer to attract the at least one customer to at least one Internet Uniform Resource Locator (URL); and means for distributing the at least one second profile-based promotional message to the at least one customer to attract the at least one customer to return to the bricks-and-mortar business.

The present invention also embraces embodiments directed to attracting in Internet user to an e-commerce business at another web site and/or a bricks-and-mortar business. In such embodiments, the first profile-based promotional message is distributed to the at least one customer to attract him to visit at least one other Internet Uniform Resource Locator (URL), and the second profile-based promotional message is distributed to the at least one customer to attract him to visit a bricks-and-mortar business. Otherwise, these embodiments are virtually identical to the

preceding embodiments, as is evident upon reading and comparing the appended claims.

Thus, the scope of the present invention should be determined by the  
5 appended claims and equivalents thereto, rather than by the examples given herein.

I claim:

1. A method of using an electronic network that interconnects a plurality of commodity purchasers with at least one commodity provider to enhance commerce, comprising:

collecting at least one of profile information and identification information on at least one customer of a bricks-and-mortar business to build a profile information database on said at least one customer;

10 generating at least one first profile-based promotional message and at least one second profile-based promotional message based on said profile information data base;

distributing said at least one first profile-based promotional message to said at least one customer to attract said at least one customer to at least one Internet Uniform Resource Locator (URL); and

15 distributing said at least one second profile-based promotional message to said at least one customer to attract said at least one customer to return to said bricks-and-mortar business.

2. The method according to claim 1, wherein said at least one customer is 20 at least one of a retail customer and a commercial customer.

3. The method according to claim 1, wherein said step of distributing said at least one first promotional message, and said step of distributing said at least one second profile-based promotional message each comprise communicating the 25 promotional message by at least one of a means for distributing a message electronically, a means for distributing a message aurally, a means for distributing a message kinesthetically, a means for distributing a message optically, and a means for distributing a message olfactorily.

30 4. The method according to claim 3, wherein said steps of distributing said first and second profile-based messages comprise communicating the messages

by at least one of a wireless distribution system and a hardwired distribution system.

5. A computer system coupled to an electronic network that interconnects a plurality of commodity purchasers with at least one commodity provider to enhance commerce, comprising:
  - a processor;
  - a memory storage device storing a sequence of instructions to be executed by said processor;
  - a system output device; and
- 10 at least one input device that is configured to collect at least one of profile information and identification information on at least one customer of a bricks-and-mortar business to build a profile information database on said at least one customer, wherein, when executed by said processor, said sequence of instructions causes said processor to:
  - 15 receive, from said profile information database, profile information on said at least one customer,
  - generate at least one first profile-based promotional message, and at least one second profile-based promotional message, and
  - send said at least one first promotional message and said at least one second promotional message to said output device; and
  - 20 wherein said sequence of instructions causes said output device to:
    - distribute said at least one first profile-based promotional message to said at least one customer to attract said at least one customer to at least one Internet Uniform Resource Locator (URL), and
    - 25 distribute said at least one second profile-based promotional message to said at least one customer to attract said at least one customer to return to said bricks-and-mortar business.
- 30 6. The computer system according to claim 5, wherein said at least one customer is at least one of a retail customer and a commercial customer.

7. The computer system according to claim 5, wherein said at least one input device is configured to collect profile information on said at least one customer based on at least one of: commodity purchase behavior of said at least one customer,  
5 clickstream behavior of said at least one customer, and data input behavior of said at least one customer.

8. The computer system according to claim 5, wherein said at least one input device comprises at least one of: a keyboard configured to identify said at least one customer based on profile information and identification information input therein, a reader configured to identify said at least one customer based on profile information and identification information input therein, and a biometrics recognition system configured to identify said at least one customer based on at least one unique body characteristic pertaining to said at least one customer.  
10

15

9. The computer system according to claim 8, wherein said input device comprises a biometrics recognition system, and wherein said biometrics recognition system is configured to identify said at least one customer based on at least one of a retina scan, a voice print, a finger print, a thumb print, a toe print, a foot print, a hand  
20 print, and a DNA print.

10. The computer system according to claim 8, wherein said at least one input device comprises a reader, and wherein said reader comprises at least one of: a barcode reader, a magnetic stripe reader, and a character reader.  
25

11. The computer system according to claim 8, wherein said sequence of instructions also cause said processor to:

analyze said profile information database to determine at least one pattern of at least one of a want, an interest, a preference, a habit, and a purchase behavior of  
30 said at least one customer; and

customize said at least one first profile-based promotional message and said at least one second profile-based promotional message based on said determined at least one pattern.

5           12. The computer system according to claim 8, wherein said at least one first profile-based promotional message comprises at least one of information about a commodity, an advertisement, discount, or coupon relating to a commodity that is available from said at least one Internet URL, wherein said at least one second profile-based promotional message comprises at least one of an advertisement, a  
10          discount, and a coupon relating to a commodity that is available from said bricks-and-mortar business, and wherein said at least one second profile-based promotional message is distributed during at least one of a shopping session in, and a check-out from, said bricks-and-mortar business.

15          13. The computer system according to claim 12, wherein said at least one first and at least one second profile-based promotional messages each promote at least one of said bricks-and-mortar business, a web site of said bricks-and-mortar business, a web site of a business that is affiliated with said bricks-and-mortar business, a bonding site, a product, a product line, a commodity provider, a  
20          commodity producer, and a merchandiser.

25          14. The computer system according to claim 5, wherein said sequence of instructions also causes said processor to send a message to said at least one customer, and wherein said message is designed to cause said at least one customer to reveal his identity.

30          15. The computer system according to claim 5, wherein said system output device is configured to distribute said at least one first profile-based promotional message and said at least one second profile-based promotional message by at least one of means for distributing a message electronically, means for distributing

a message aurally, means for distributing a message kinesthetically, means for distributing a message optically, and means for distributing a message olfactorily.

16. The computer system according to claim 15, wherein said at least one  
5 first and at least one second profile-based messages are distributed by at least one of a  
wireless distribution system and a hardwired distribution system.

17. The computer system according to claim 5, wherein said input device is  
configured to generate a customer identification number that is unique to said at least  
10 one customer, and to logically connect said unique customer identification number to  
use, by said at least one customer, of a device that is linked to said electronic network.

18. The computer system according to claim 17, wherein said input device  
is configured to collect profile information on said at least one customer at each  
15 instance that:

said at least one customer exhibits at least one of commodity purchase  
behavior, clickstream behavior, and data input behavior, and

said behavior is logically connected to said unique customer identification  
number assigned to said at least one customer.

20

19. The computer system according to claim 17, wherein said profile  
information database enables said processor to generate profile-based promotional  
messages that are closely customized to at least one of: a need, a want, an interest, a  
preference, a habit, and a purchase behavior of said at least one customer, and  
25 wherein said profile-based promotional messages are designed to encourage said at  
least one customer to further use at least one of: said bricks-and mortar business, a  
web site of said bricks-and-mortar business, a web site of a business that is affiliated  
with said bricks-and-mortar business, a bonding site, a product, a product line, a  
commodity provider, a commodity producer, and a merchandiser.

30

20. The computer system according to claim 5, wherein said sequence of instructions cause said system output device to promote a bonding site to said at least one customer by distributing said at least one first profile-based promotional message to said at least one customer.

5

21. The computer system according to claim 5, wherein said sequence of instructions causes said processor to download information on said at least one customer from said profile information database to a processor at a bonding site, and wherein said downloaded information allows said bonding site to customize content provided to said at least one customer when said at least one customer visits said bonding site.

22. The computer system according to claim 5, wherein said computer system further comprises a shopping cart computer system for use in said bricks-and-mortar business, wherein said shopping cart computer system comprises:

shopping cart hardware, comprising a shopping cart processor;  
shopping cart software implemented on said shopping cart hardware;  
a shopping cart memory storage device coupled to said shopping cart processor;  
an input device comprising a customer recognition system that is coupled to said shopping cart hardware and to said shopping cart software, and wherein said customer recognition system is configured to identify a customer; and  
a shopping cart output device that is connected to said processor by at least one of a wireless connection and a hardwired connection, and wherein said system output device is configured to communicate said first profile-based promotional message and said second profile-based promotional messages to said shopping cart output device by at least one of said wireless connection and said hardwired connection.

30

23. The computer system according to claim 22, wherein said shopping

cart software further comprises a catalog of commodities available from at least one of:

5 a web site of said bricks-and-mortar business, a bricks-and-mortar business, a web site of a business that is affiliated with said bricks-and-mortar business, a bonding site, a commodity provider, a commodity producer, and a merchandiser.

24. The computer system according to claim 23, wherein said shopping cart software is configured to present a customer with a catalog of commodities that is customized to said customer based on information stored in said profile 10 information database.

25. The computer system according to claim 23, wherein said catalog of commodities presented to said customer is dynamically updated based on at least one of data input behavior of said customer, commodity purchase behavior of said 15 customer, and clickstream behavior of said customer.

26. A computer-readable medium having stored thereon a sequence of instructions which, when executed by a processor, cause the processor to perform the steps of:

20 collecting at least one of profile information and identification information to build a profile information database on at least one customer of a bricks-and-mortar business;

generating at least one first profile-based promotional message and at least 25 one second profile-based promotional message based on said profile information database;

distributing said at least one first profile-based promotional message to said at least one customer to attract said at least one customer to at least one Internet Uniform Resource Locator (URL); and

distributing said at least one second profile-based promotional message to said 30 at least one customer to attract said at least one customer to return to said bricks-

and-mortar business..

27. The computer-readable medium having stored thereon a sequence of instructions according to claim 26, wherein said at least one customer is at least one  
5 of a retail customer and a commercial customer.

28. A system for integrating electronic commerce-based businesses with bricks-and-mortar-based businesses to enhance commerce, comprising:  
a processor connected to an electronic network an electronic network that  
10 interconnects a plurality of commodity purchasers with at least one commodity provider;  
an output device connected to said processor;  
a memory storage device connected to said processor and storing a sequence of instructions to be executed by said processor; and  
15 at least one input device that is coupled to said processor and that is configured to collect at least one of profile information and identification information on at least one customer of a bricks-and-mortar business to build a profile information database on said at least one customer,  
wherein, when executed by said processor, said sequence of instructions  
20 causes said processor to:  
receive, from said profile information database, profile information on said at least one customer,  
generate at least one first profile-based promotional message and at least one second profile-based promotional message, and  
25 send said at least one first promotional message and said at least one second promotional message to said output device; and  
wherein said output device is configured to:  
distribute said at least one first profile-based promotional message to said at least one customer to attract said at least one customer to at least one Internet  
30 Uniform Resource Locator (URL); and

distribute said at least one second profile-based promotional message to said at least one customer to attract said at least one customer to return to said bricks-and-mortar business.

5        29.      The system according to claim 28, wherein said at least one customer is at least one of a retail customer and a commercial customer.

30.     A system that interconnects a plurality of commodity purchasers with at least one commodity provider to enhance commerce, comprising:

10      means for collecting at least one of profile information and identification information on at least one customer of a bricks-and-mortar business to build a profile information database on said at least one customer;

15      means for generating at least one first profile-based promotional message and at least one second profile-based promotional message based on said profile information database;

means for distributing said at least one first profile-based promotional message to said at least one customer to attract said at least one customer to at least one Internet Uniform Resource Locator (URL); and

20      means for distributing said at least one second profile-based promotional message to said at least one customer to attract said at least one customer to return to said bricks-and-mortar business.

25     31.     A method of using an electronic network that interconnects a plurality of commodity purchasers with at least one commodity provider to enhance commerce, comprising:

collecting at least one of profile information and identification information on at least one customer of an e-commerce business to build a profile information database on said at least one customer;

30      generating at least one first profile-based promotional message and at least one second profile-based promotional message based on said profile information

database;

distributing said at least one first profile-based promotional message to said at least one customer to attract said at least one customer to visit at least one Internet Uniform Resource Locator (URL); and

5 distributing said at least one second profile-based promotional message to said at least one customer to attract said at least one customer to visit a bricks-and-mortar business.

32. The method according to claim 31, wherein said at least one customer  
10 is at least one of a retail customer and a commercial customer.

33. The method according to claim 31, wherein said step of distributing said at least one first promotional message, and said step of distributing said at least one second profile-based promotional message each comprise communicating the promotional message by at least one of means for distributing a message electronically, means for distributing a message aurally, means for distributing a message kinesthetically, means for distributing a message optically, and means for distributing a message olfactorily.  
15

20 34. The method according to claim 33, wherein said steps of distributing said first and second profile-based messages comprise communicating the messages by at least one of a wireless distribution system and a hardwired distribution system.

35. A computer system coupled to an electronic network that  
25 interconnects a plurality of commodity purchasers with at least one commodity provider to enhance commerce, comprising:

a processor;  
a memory storage device storing a sequence of instructions to be executed by  
said processor;  
30 a system output device; and

at least one input device that is configured to collect at least one of profile information and identification information on at least one customer of an e-commerce business to build a profile information database on said at least one customer,

5 wherein, when executed by said processor, said sequence of instructions causes said processor to:

receive, from said profile information database, profile information on said at least one customer,

10 generate at least one first profile-based promotional message, and at least one second profile-based promotional message, and

send said at least one first promotional message and said at least one second promotional message to said output device; and

wherein said sequence of instructions causes said output device to:

15 distribute said at least one first profile-based promotional message to said at least one customer to attract said at least one customer to visit at least one other Internet Uniform Resource Locator (URL), and

distribute said at least one second profile-based promotional message to said at least one customer to attract said at least one customer to visit a bricks-and-mortar business.

20

36. The computer system according to claim 35, wherein said at least one customer is at least one of a retail customer and a commercial customer.

37. The computer system according to claim 35, wherein said at least one input device is configured to collect profile information on said at least one customer based on at least one of: commodity purchase behavior of said at least one customer, clickstream behavior of said at least one customer, and data input behavior of said at least one customer.

30 38. The computer system according to claim 35, wherein said at least one

input device comprises at least one of: a keyboard configured to identify said at least one customer based on profile information and identification information input therein, a reader configured to identify said at least one customer based on profile information and identification information input therein, and a biometrics recognition system configured to identify said at least one customer based on at least one unique body characteristic pertaining to said at least one customer.

39. The computer system according to claim 38, wherein said input device comprises a biometrics recognition system, and wherein said biometrics recognition system is configured to identify said at least one customer based on at least one of a retina scan, a voice print, a finger print, a thumb print, a toe print, a foot print, a hand print, and a DNA print.

40. The computer system according to claim 38, wherein said at least one input device comprises a reader, and wherein said reader comprises at least one of a barcode reader, a magnetic stripe reader, and a character reader.

41. The computer system according to claim 38, wherein said sequence of instructions also cause said processor to:

analyze said profile information database to determine at least one pattern of at least one of a want, an interest, a preference, a habit, and a purchase behavior of said at least one customer; and

customize said at least one first profile-based promotional message and said at least one second profile-based promotional message based on said determined at least one pattern.

42. The computer system according to claim 38, wherein said at least one first profile-based promotional message comprises at least one of information about a commodity, an advertisement, discount, or coupon relating to a commodity that is available from said at least one other Internet URL, wherein said at least one second profile-based promotional message comprises at least one of an advertisement, a

discount, and a coupon relating to a commodity that is available from a bricks-and-mortar business, and wherein said at least one second profile-based promotional message is distributed during at least one of a shopping session in, and a check-out from, said bricks-and-mortar business.

5

43. The computer system according to claim 42, wherein said at least one first and at least one second profile-based promotional messages each promote at least one of a bricks-and-mortar business, a web site of said bricks-and-mortar business, a web site of a business that is affiliated with said bricks-and-mortar business, a bonding site, a product, a product line, a commodity provider, a commodity producer, and a merchandiser.

10 44. The computer system according to claim 35, wherein said sequence of instructions also cause said processor to send a message to said at least one customer, and wherein said message is designed to cause said at least one customer to reveal his identity.

15 45. The computer system according to claim 35, wherein said system output device is configured to distribute said at least one first profile-based promotional message and said at least one second profile-based promotional message by at least one of means for distributing a message electronically, means for distributing a message aurally, means for distributing a message kinesthetically, means for distributing a message optically, and means for distributing a message olfactorily.

25 46. The computer system according to claim 45, wherein said at least one first and at least one second profile-based messages are distributed by at least one of a wireless distribution system and a hardwired distribution system.

30 47. The computer system according to claim 35, wherein said input device is configured to generate a customer identification number that is unique to said at

least one customer, and to logically connect said unique customer identification number to use, by said at least one customer, of a device that is linked to said electronic network.

5        48. The computer system according to claim 47, wherein said input device is configured to collect profile information on said at least one customer at each instance that:

      said at least one customer exhibits at least one of commodity purchase behavior, clickstream behavior, and data input behavior, and

10      said behavior is logically connected to said unique customer identification number assigned to said at least one customer.

15      49. The computer system according to claim 47, wherein said profile information database enables said processor to generate profile-based promotional messages that are closely customized to at least one of: a need, a want, an interest, a preference, a habit, and a purchase behavior of said at least one customer, and wherein said profile-based promotional messages are designed to encourage said at least one customer to further use at least one of: a bricks-and mortar business, a web site of said bricks-and-mortar business, a web site of a business that is affiliated with  
20      said bricks-and-mortar business, a bonding site, a product, a product line, a commodity provider, a commodity producer, and a merchandiser.

25      50. The computer system according to claim 35, wherein said sequence of instructions cause said system output device to promote a bonding site to said at least one customer by distributing said at least one first profile-based promotional message to said at least one customer.

30      51. The computer system according to claim 35, wherein said sequence of instructions causes said processor to download information on said at least one customer from said profile information database to a processor at a bonding site, and

wherein said downloaded information allows said bonding site to customize content provided to said at least one customer when said at least one customer visits said bonding site.

5        52. The computer system according to claim 35, wherein said computer system further comprises a shopping cart computer system for use at an e-commerce business, wherein said shopping cart computer system comprises

shopping cart hardware, comprising a shopping cart processor;  
shopping cart software implemented on said shopping cart hardware;

10      a shopping cart memory storage device coupled to said processor;

an input device comprising a customer recognition system that is coupled to said shopping cart hardware and to said shopping cart software, and wherein said customer recognition system is configured to identify a customer;

15      a shopping cart output device that is connected to said shopping cart processor by at least one of a wireless connection and a hardwired connection, and wherein said system output device is configured to communicate said first profile-based promotional message and said second profile-based promotional messages to said shopping cart output device by at least one of said wireless connection and said hardwired connection.

20

53. The computer system according to claim 52, wherein said shopping cart software further comprises a catalog of commodities available from at least one of:

25      a web site of a bricks-and-mortar business, a bricks-and-mortar business, a web site of a business that is affiliated with said bricks-and-mortar business, a bonding site, a commodity provider, a commodity producer, and a merchandiser.

30      54. The computer system according to claim 53, wherein said shopping cart software is configured to present a customer with a catalog of commodities that is customized to said customer based on information stored in said profile

information database.

55. The computer system according to claim 53, wherein said catalog of commodities presented to said customer is dynamically updated based on at least one 5 of data input behavior of said customer, commodity purchase behavior of said customer, and clickstream behavior of said customer.

56. A computer-readable medium having stored thereon a sequence of instructions which, when executed by a processor, cause the processor to perform the 10 steps of:

collecting at least one of profile information and identification information to build a profile information database on at least one customer of an e-commerce business;

15 generating at least one first profile-based promotional message and at least one second profile-based promotional message based on said profile information database;

distributing said at least one first profile-based promotional message to said at least one customer to attract said at least one customer to visit at least one Internet Uniform Resource Locator (URL); and

20 distributing said at least one second profile-based promotional message to said at least one customer to attract said at least one customer to visit a bricks-and-mortar business.

57. The computer-readable medium according to claim 56, wherein said at 25 least one customer is at least one of a retail customer and a commercial customer.

58. A system for integrating electronic commerce-based businesses with bricks-and-mortar-based businesses to enhance commerce, comprising:

30 a processor connected to an electronic network that interconnects a plurality of commodity purchasers with at least one commodity provider;

- an output device connected to said processor;
- a memory storage device connected to said processor and storing a sequence of instructions to be executed by said processor; and
- at least one input device that is coupled to said processor and that is configured to collect at least one of profile information and identification information on at least one customer of an e-commerce business to build a profile information database on said at least one customer,
- wherein, when executed by said processor, said sequence of instructions causes said processor to:
- 10 receive, from said profile information database, profile information on said at least one customer,
- generate at least one first profile-based promotional message and at least one second profile-based promotional message, and
- send said at least one first promotional message and said at least one second promotional message to said output device; and
- 15 wherein said output device is configured to:
- distribute said at least one first profile-based promotional message to said at least one customer to attract said at least one customer to visit at least one Internet Uniform Resource Locator (URL); and
- 20 distribute said at least one second profile-based promotional message to said at least one customer to attract said at least one customer to visit a bricks-and-mortar business.
59. The system according to claim 58, wherein said at least one customer is at least one of a retail customer and a commercial customer.
60. A system that interconnects a plurality of commodity purchasers with at least one commodity provider to enhance commerce, comprising:
- means for collecting at least one of profile information and identification information on at least one customer of an e-commerce business to build a profile

- information database on said at least one customer,  
means for generating at least one first profile-based promotional message and  
at least one second profile-based promotional message based on said profile  
information database;
- 5 means for distributing said at least one first profile-based promotional  
message to said at least one customer to attract said at least one customer to visit at  
least one Internet Uniform Resource Locator (URL); and  
means for distributing said at least one second profile-based promotional  
message to said at least one customer to attract said at least one customer to visit a  
10 bricks-and-mortar business.

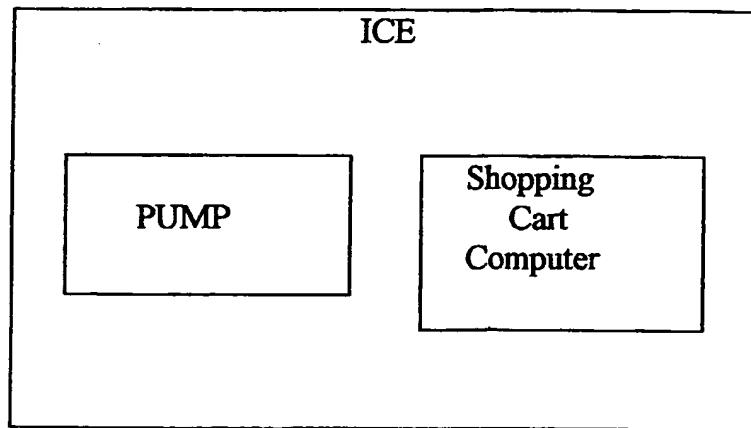


Fig. 1a: Exemplary ICE Configuration

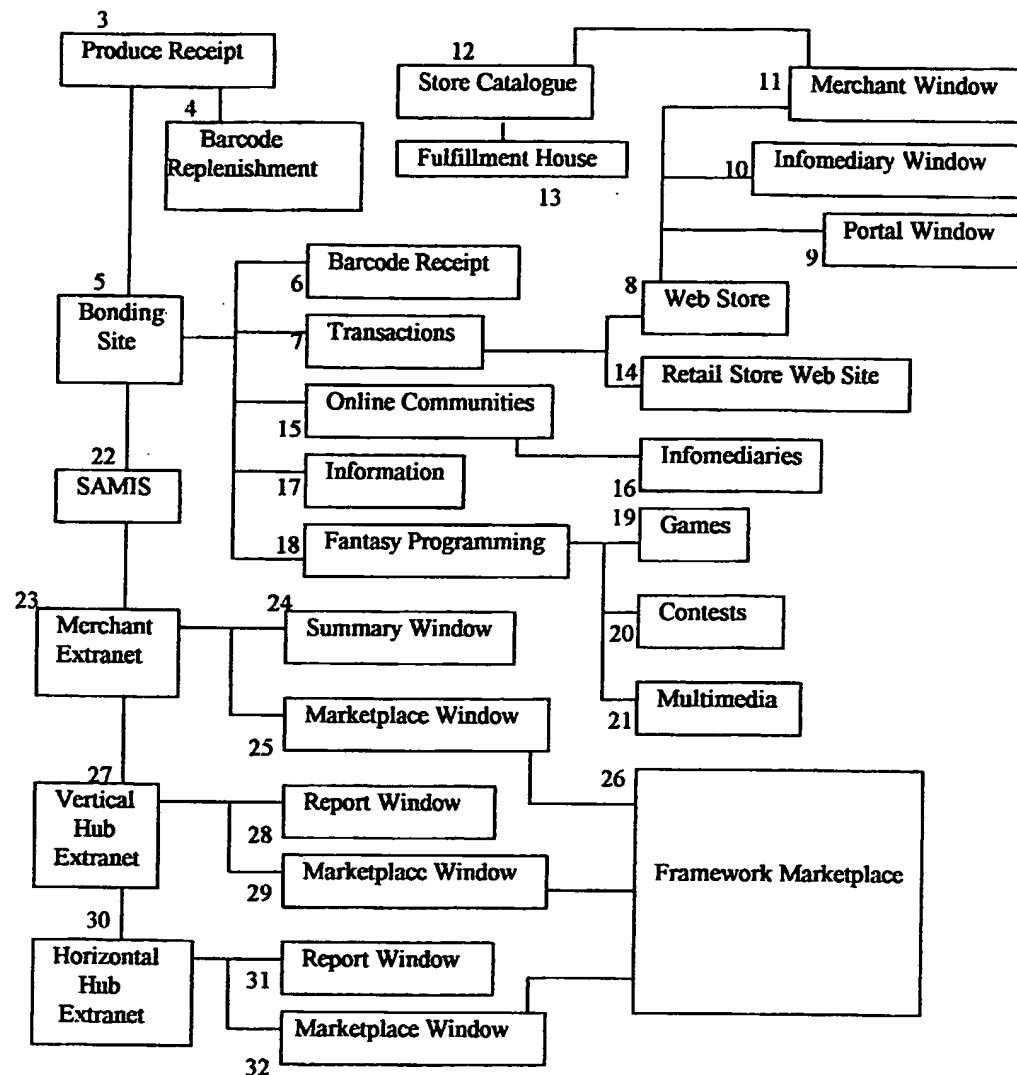


Fig. 1b: Diagram of Exemplary PUMP Functions

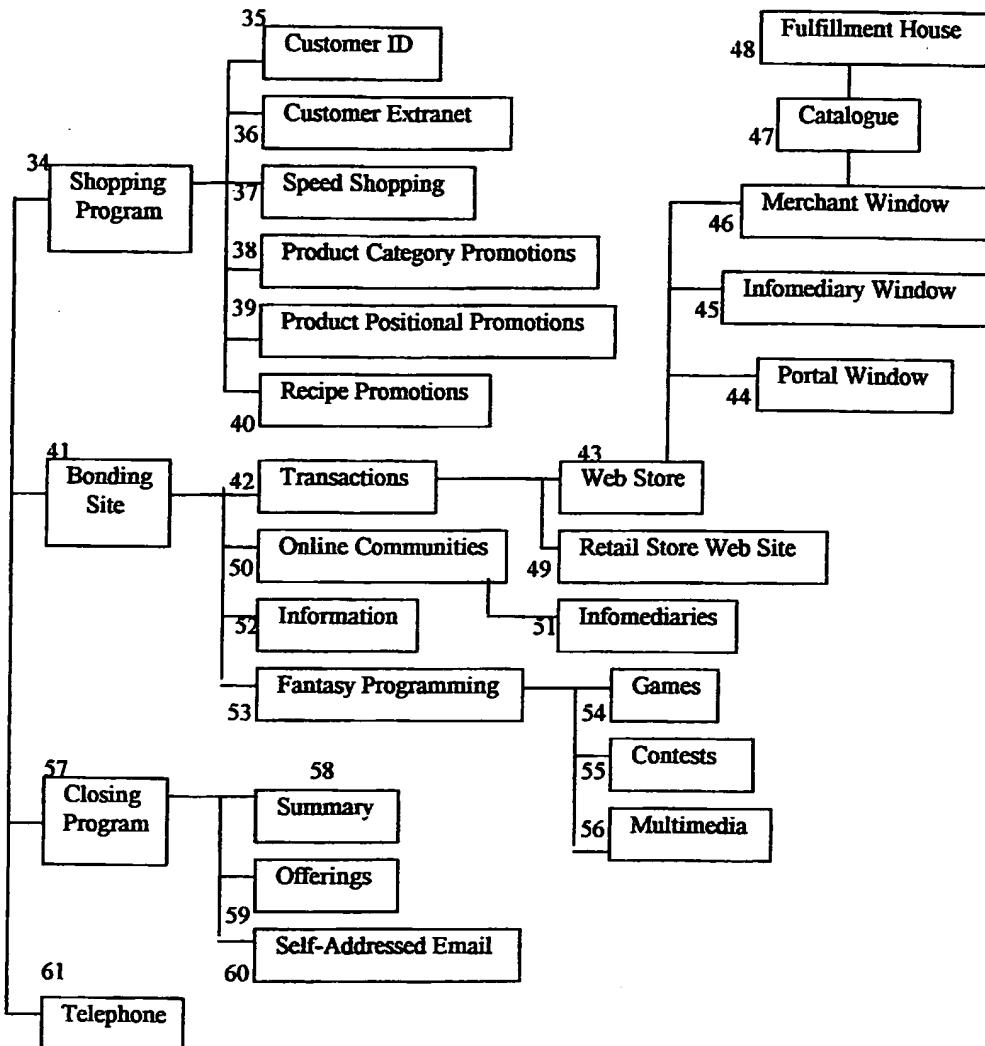


Fig. 1c: Diagram of Exemplary Shopping Cart Computer (SCC) Functions

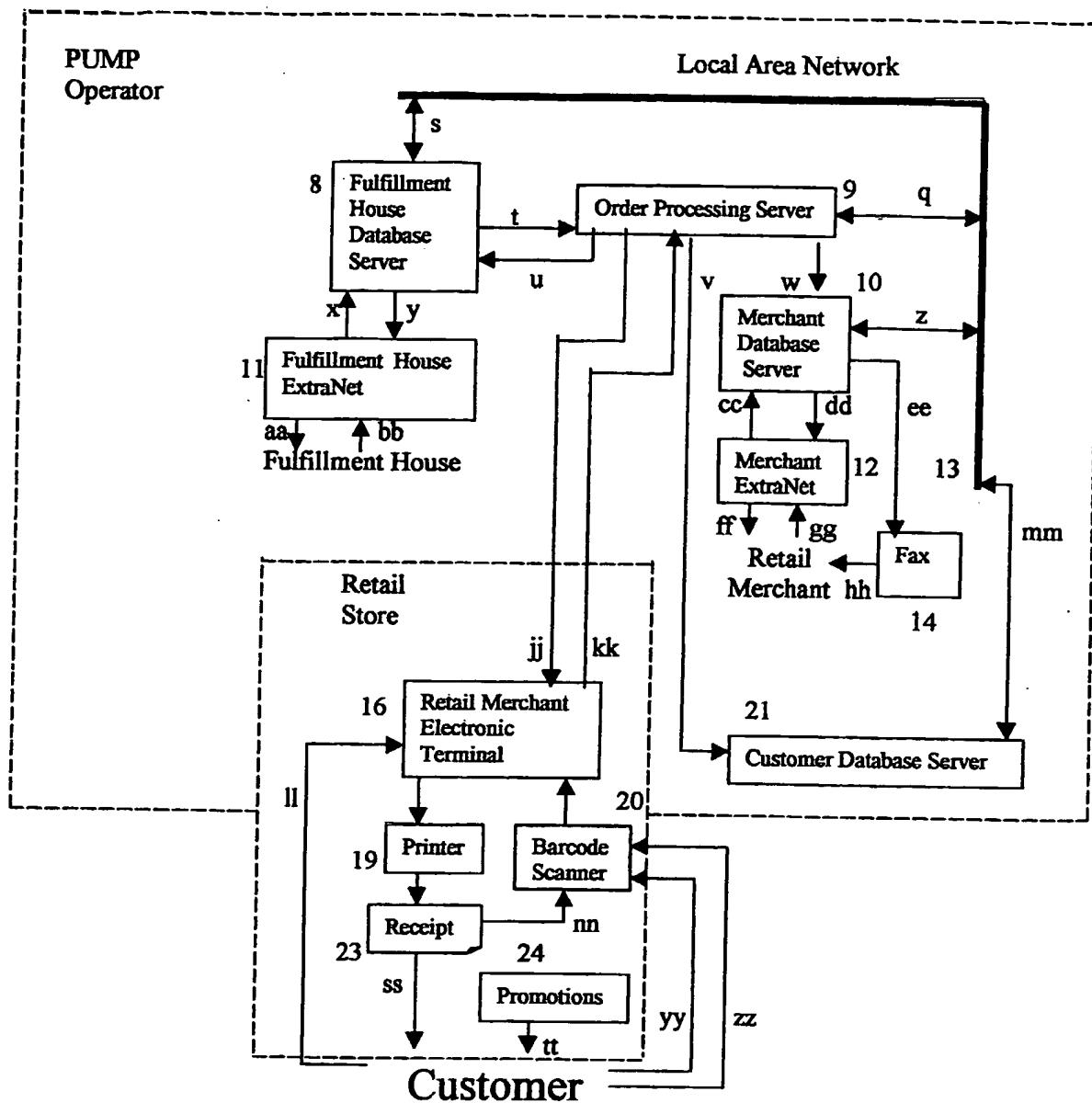


Fig. 2: An Exemplary Embodiment For Core Business System (CBS) Functional Blocks And Data Flows

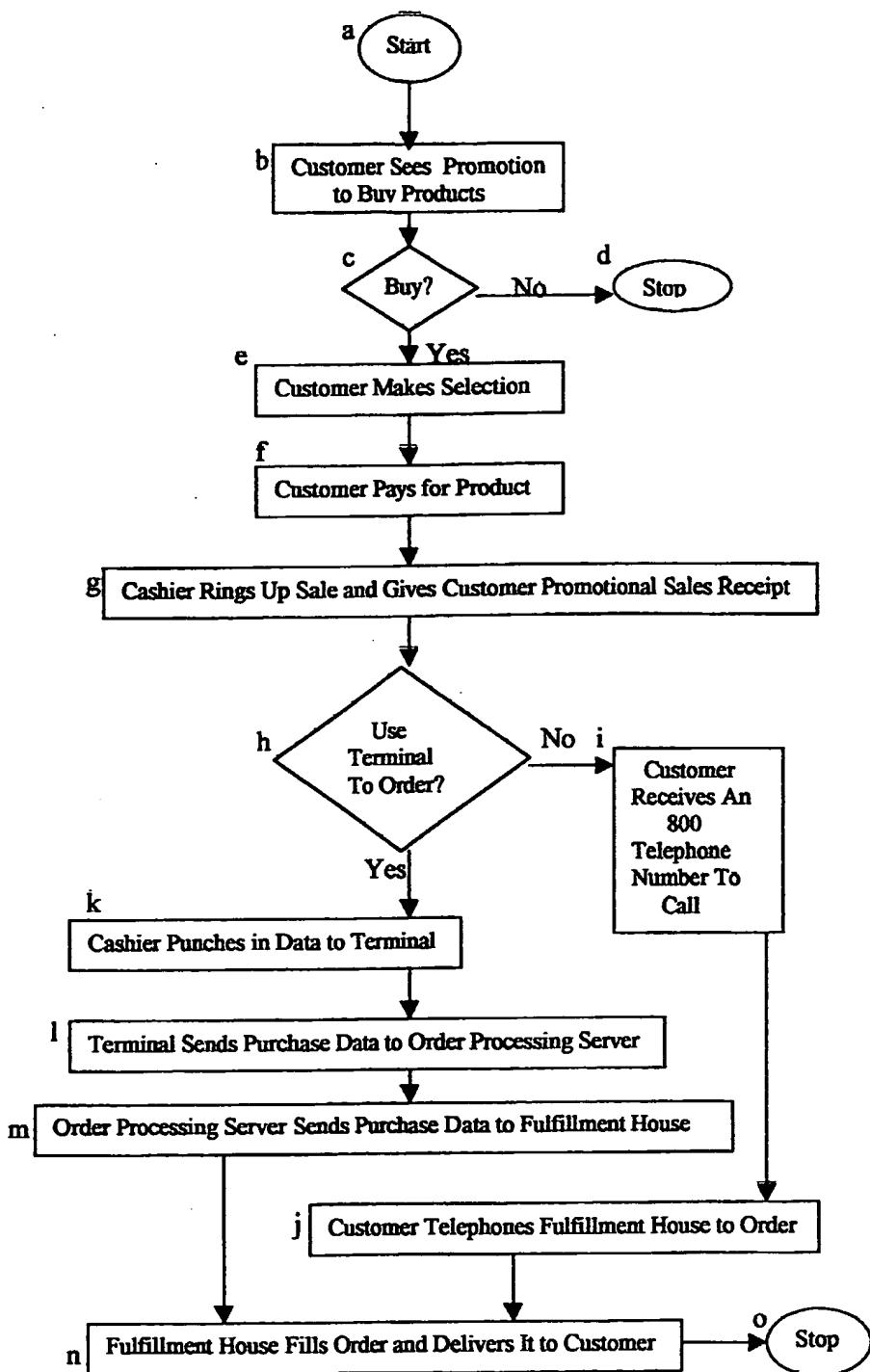


Fig. 3: An Exemplary Embodiment Of An  
In-Store Electronic Sales Process

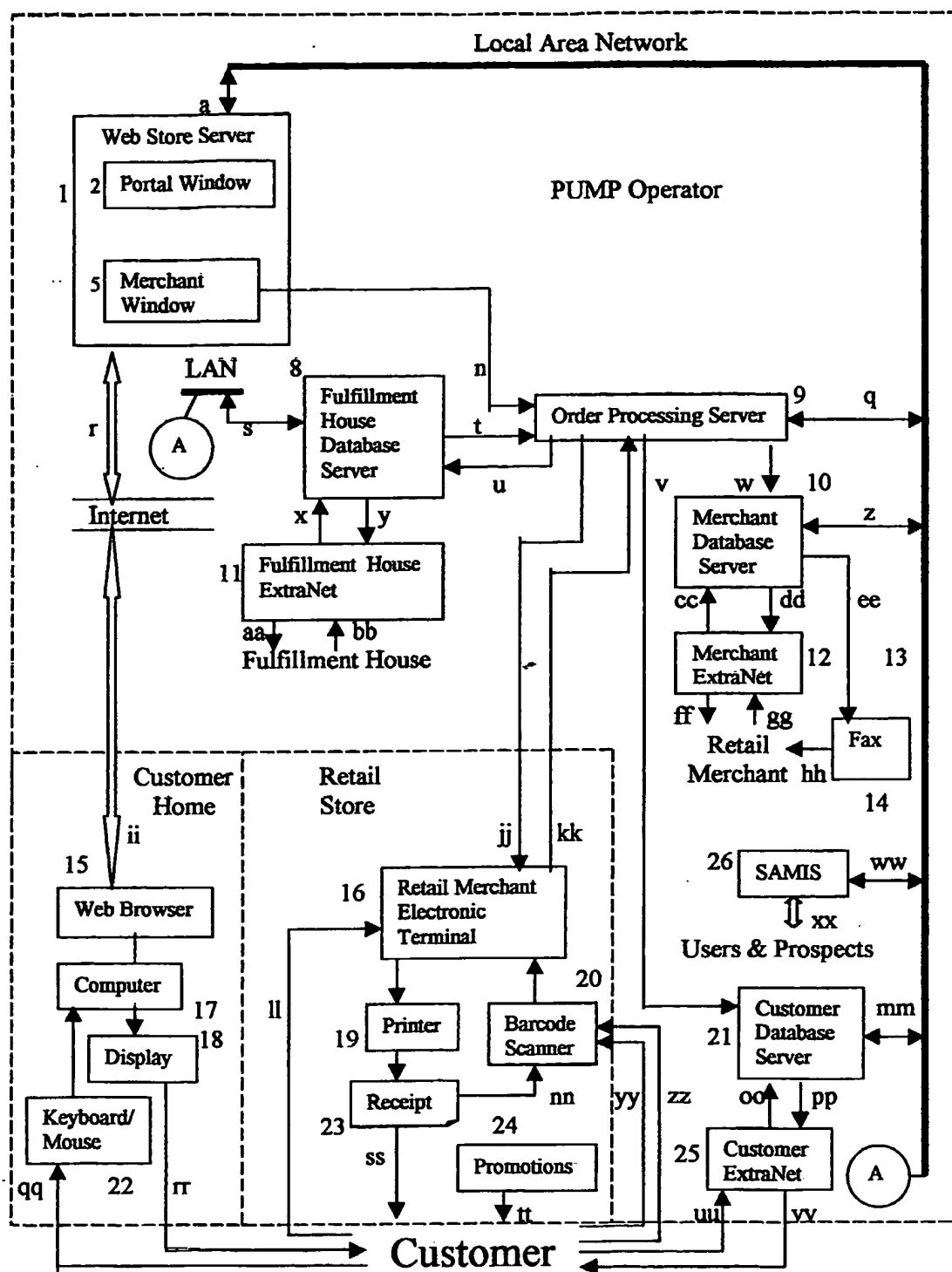


Fig. 4: An Exemplary Embodiment Of PUMP P1  
Functional Blocks and Data Flows

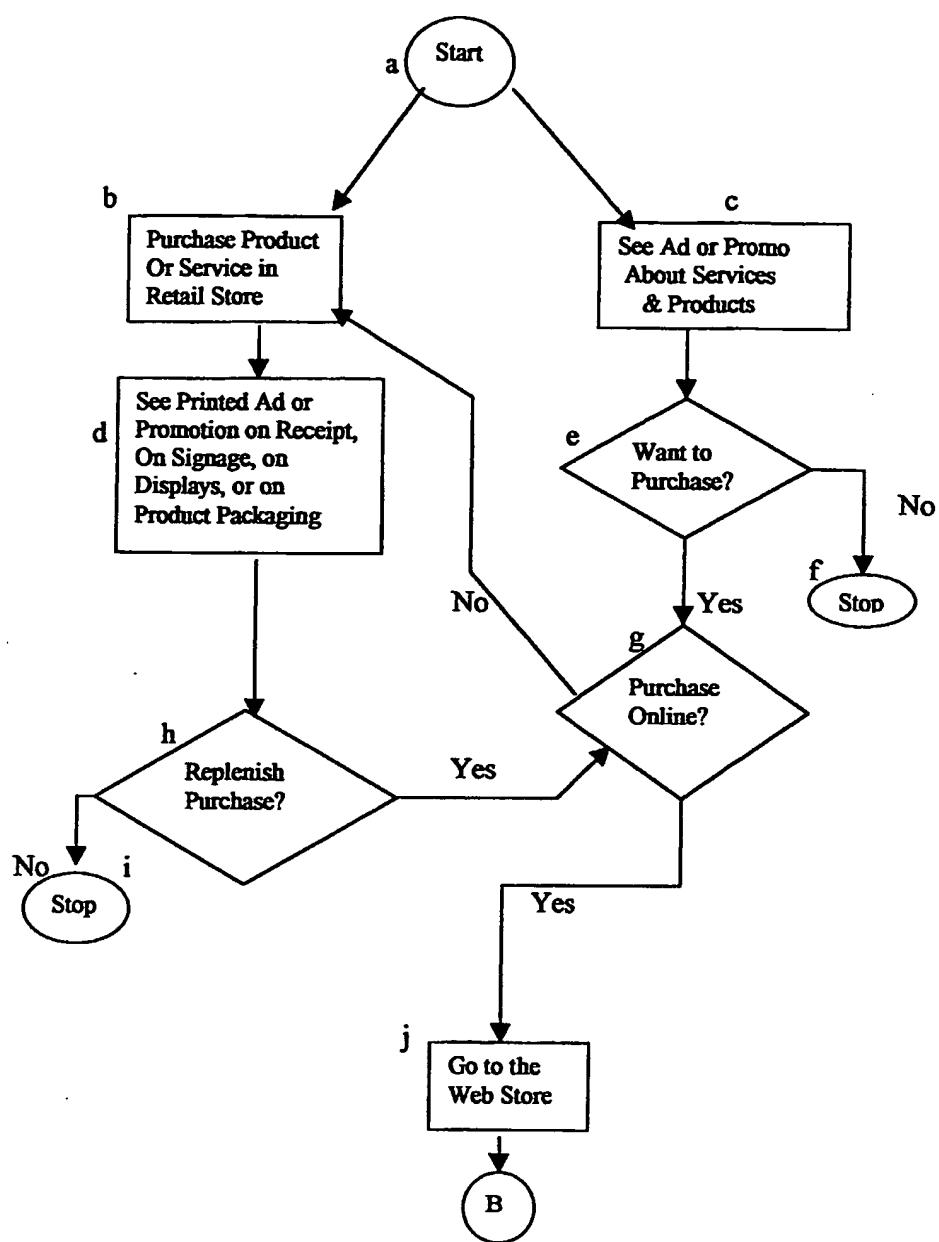


Fig. 5: An Exemplary Embodiment Of A Purchase Promotion Process  
Of Products and Services Offered For Sale Electronically In Store

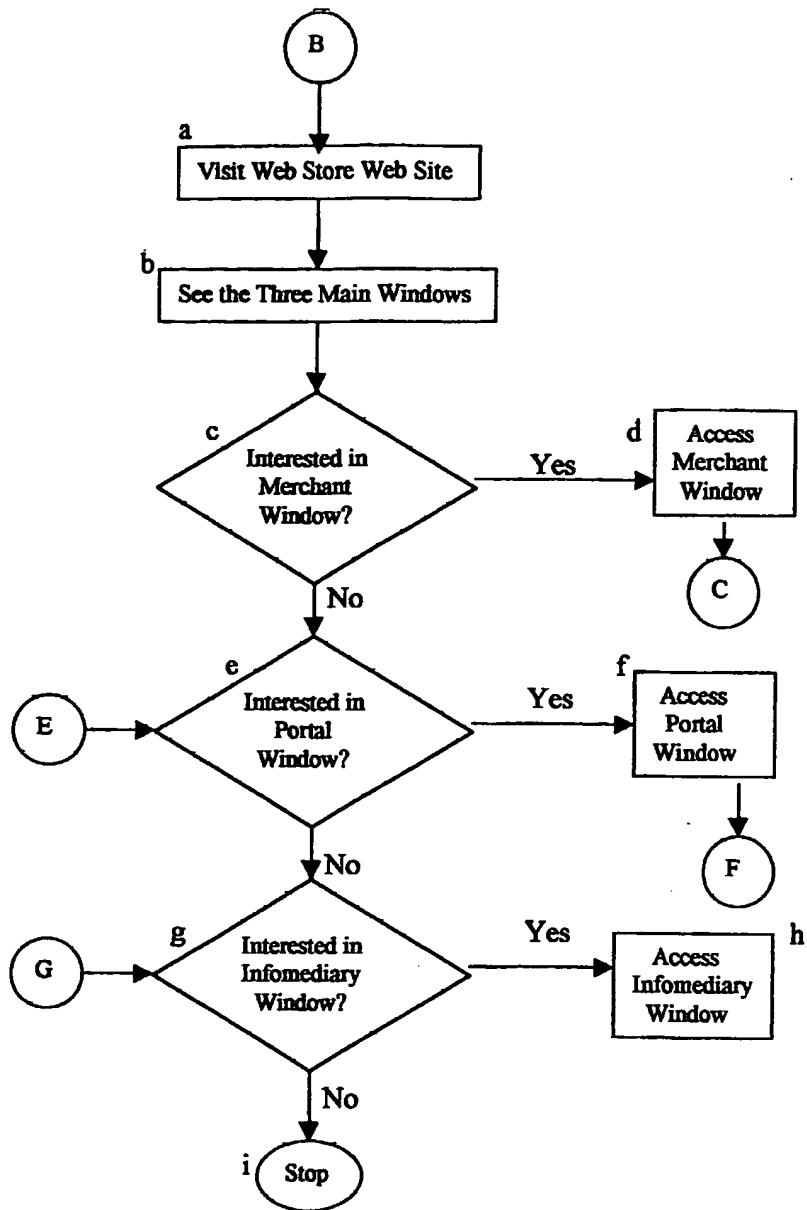
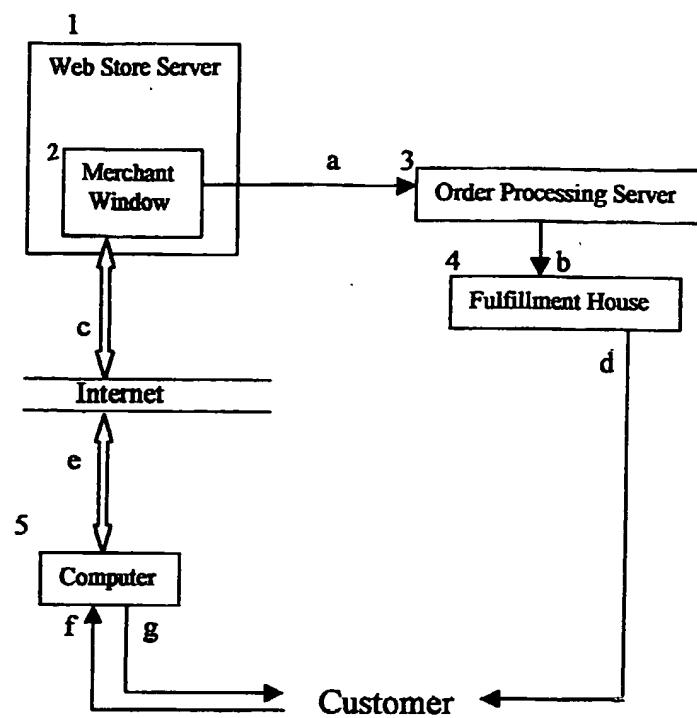


Fig. 6: An Exemplary Embodiment Of A Customer Web Store Accessing Process



**Fig. 7: An Exemplary Embodiment Of Merchant Window Functional Blocks And Data Flows**

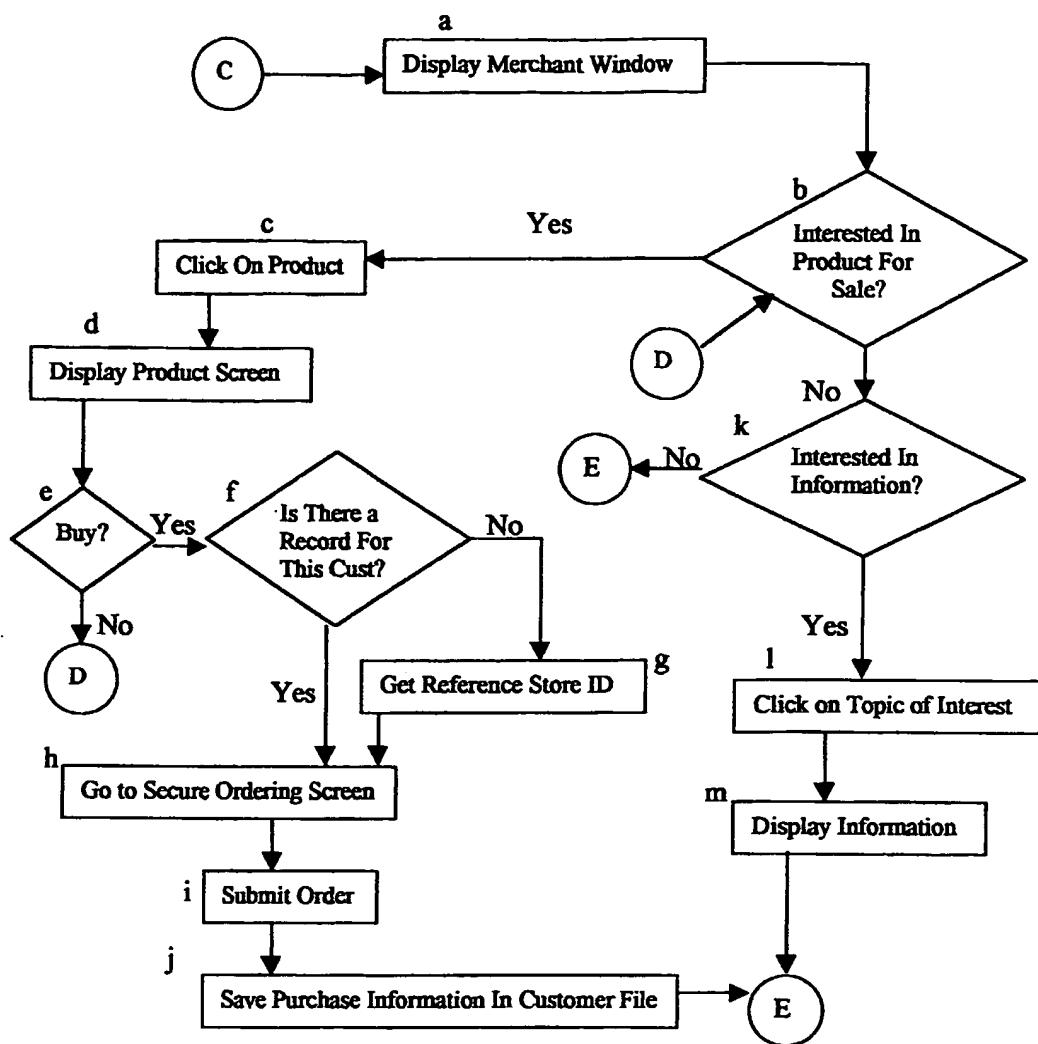


Fig. 8: An Exemplary Embodiment Of A Merchant Window Access Process

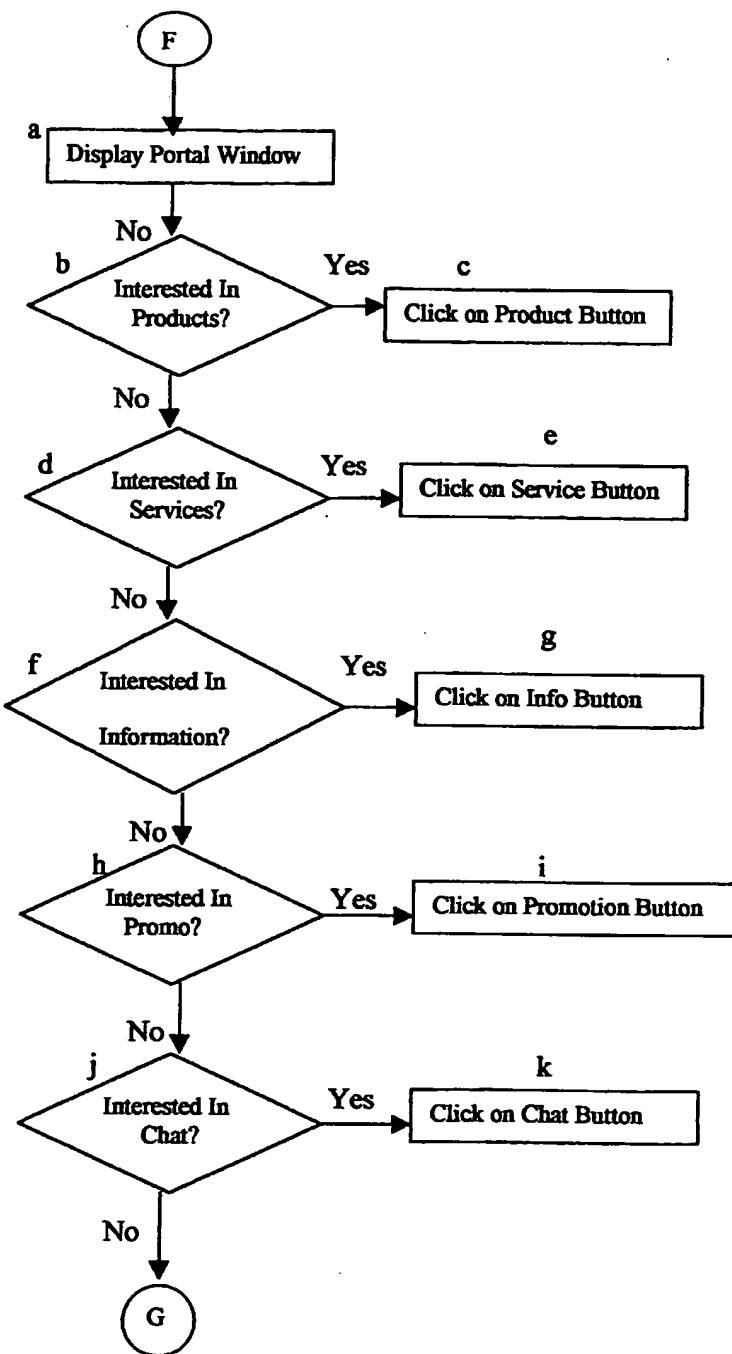


Fig. 9: An Exemplary Embodiment Of A Portal Window Access Process

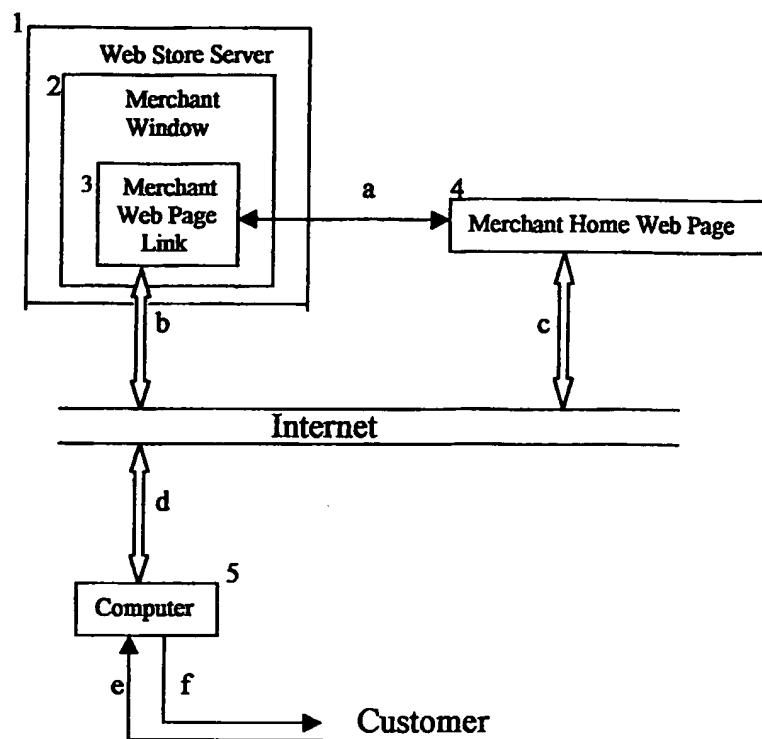


Fig. 10: An Exemplary Embodiment Of Merchant Home Page Interconnectivity

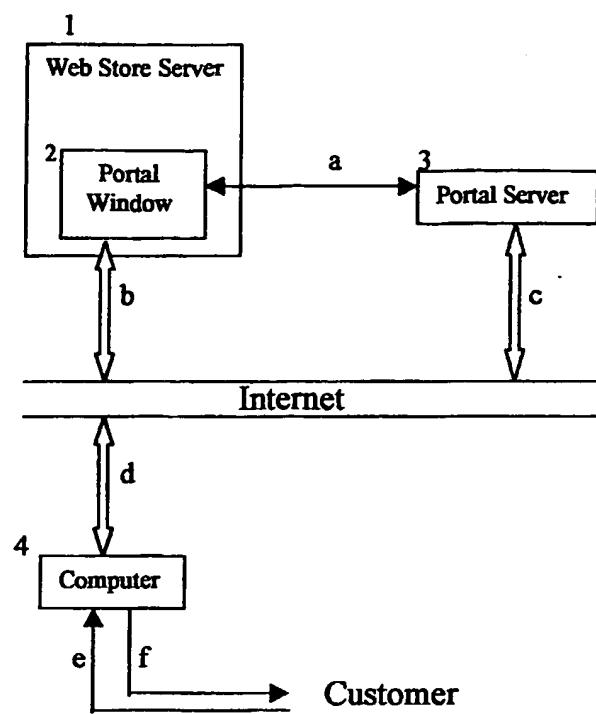


Fig. 11: An Exemplary Embodiment Of Portal Window Functional Blocks And Data Flows

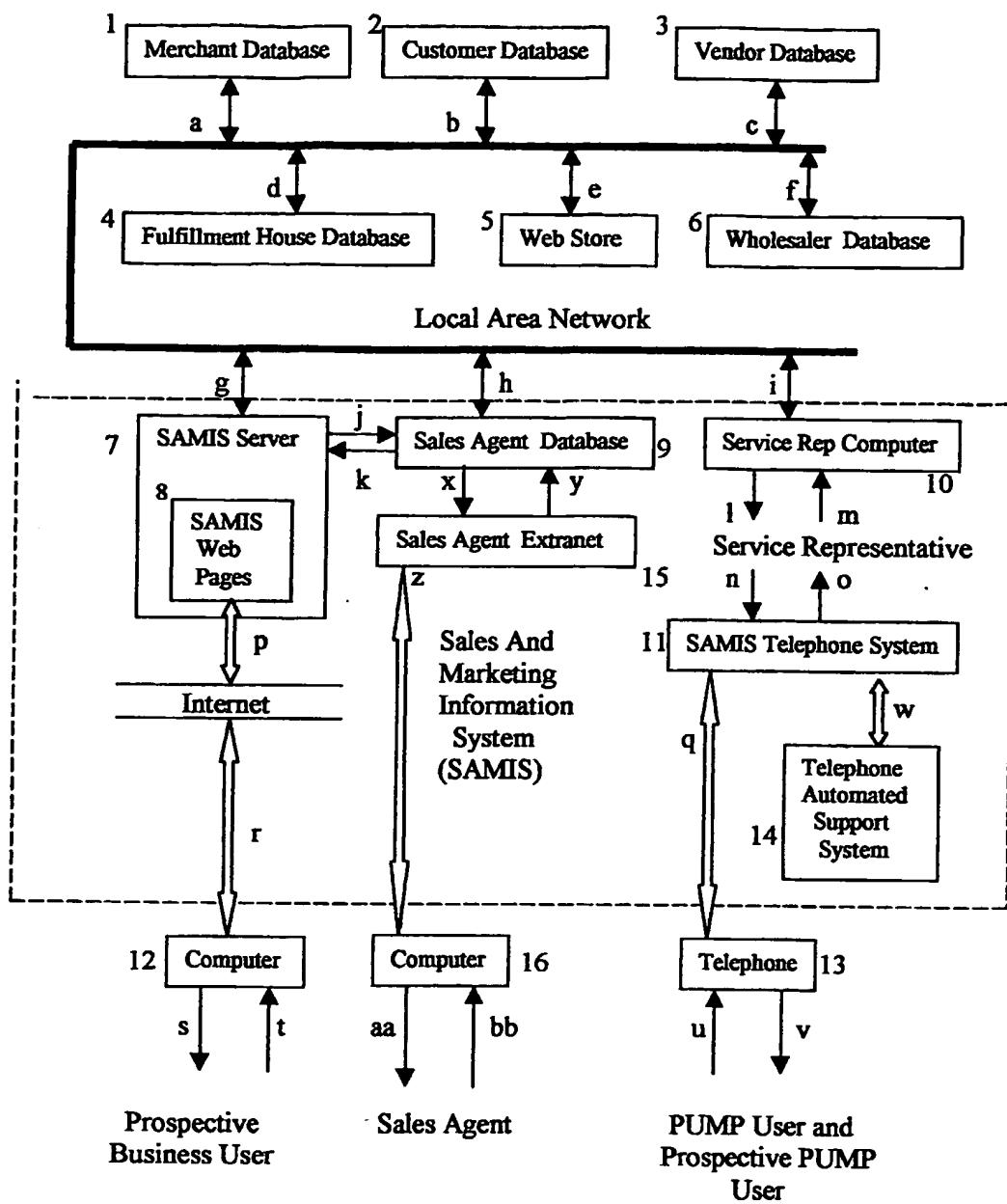


Fig. 12: An Exemplary Embodiment Of Sales And Marketing Information System (SAMIS) Functional Blocks And Data Flows

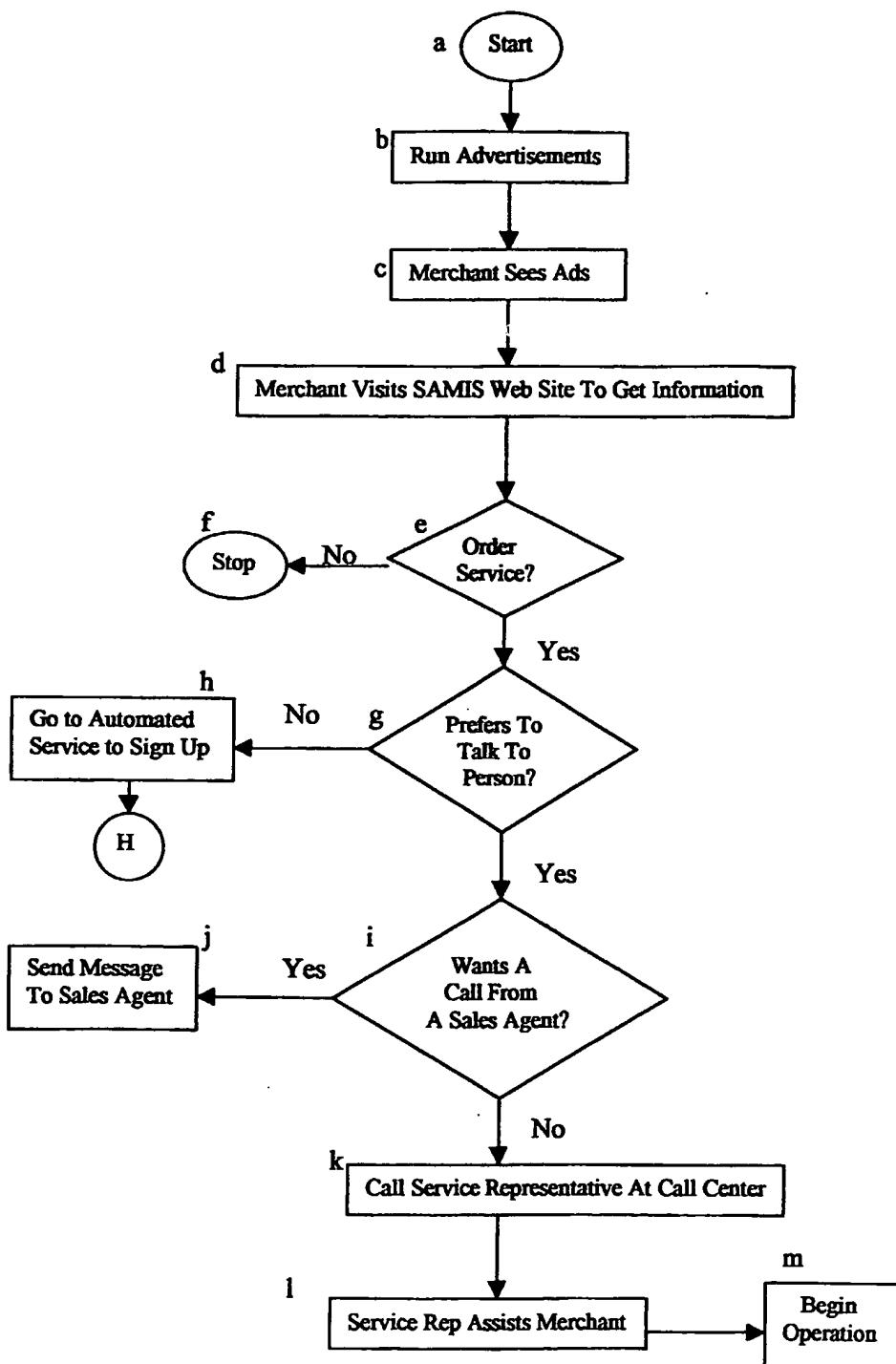


Fig. 13: An Exemplary Embodiment of Merchant Prospect  
SAMIS Access Process

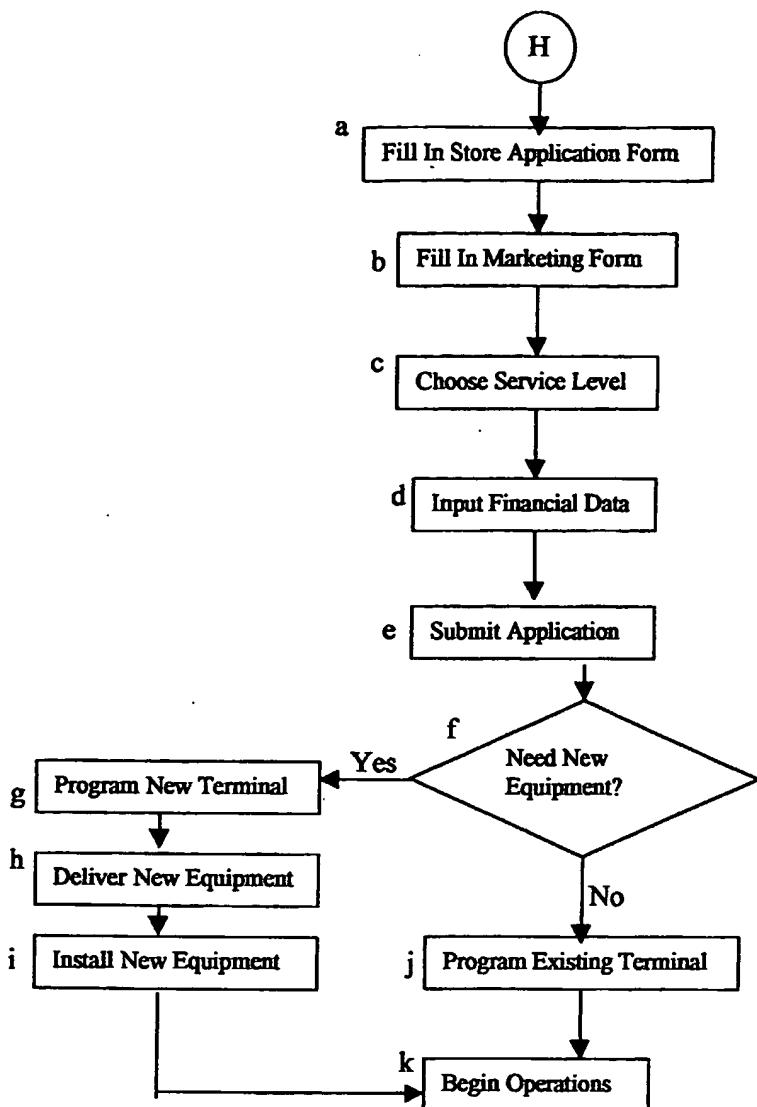


Fig. 14: An Exemplary Embodiment Of An Automated Merchant Signup Process

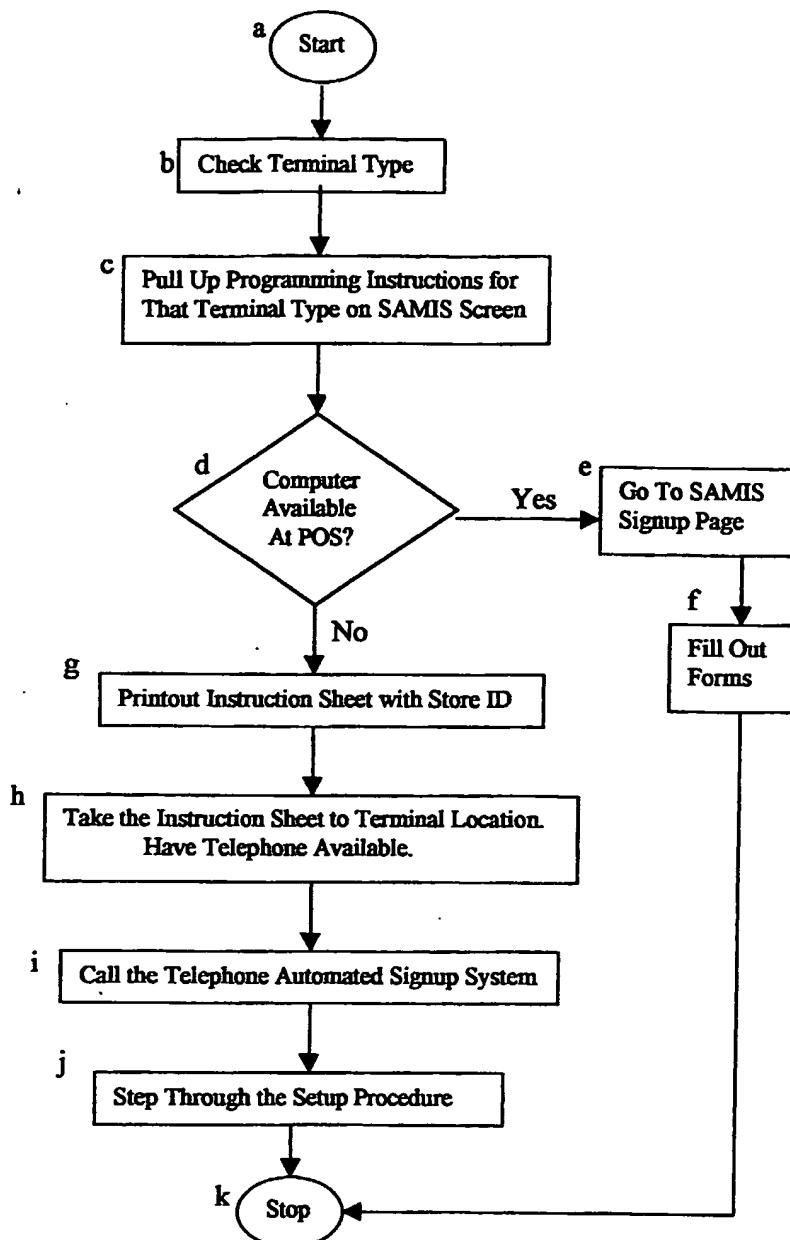


Fig. 15: An Exemplary Embodiment of Existing Terminal Programming Procedure

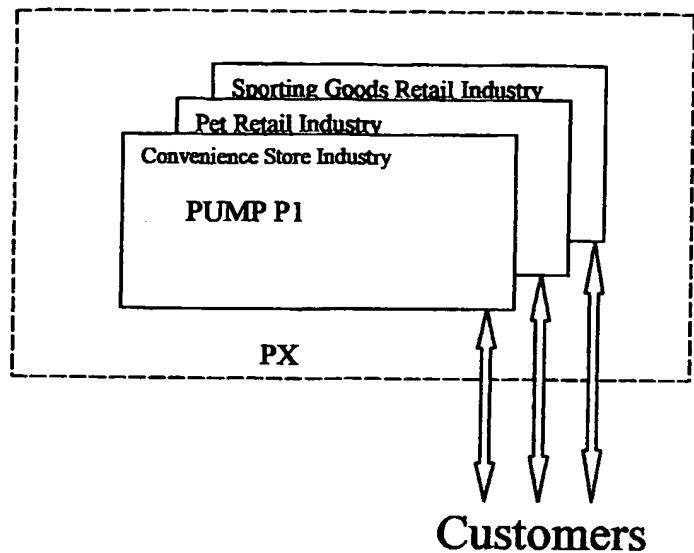


Fig. 16: An Exemplary Embodiment For PUMP PX  
Expansion Into New Industries

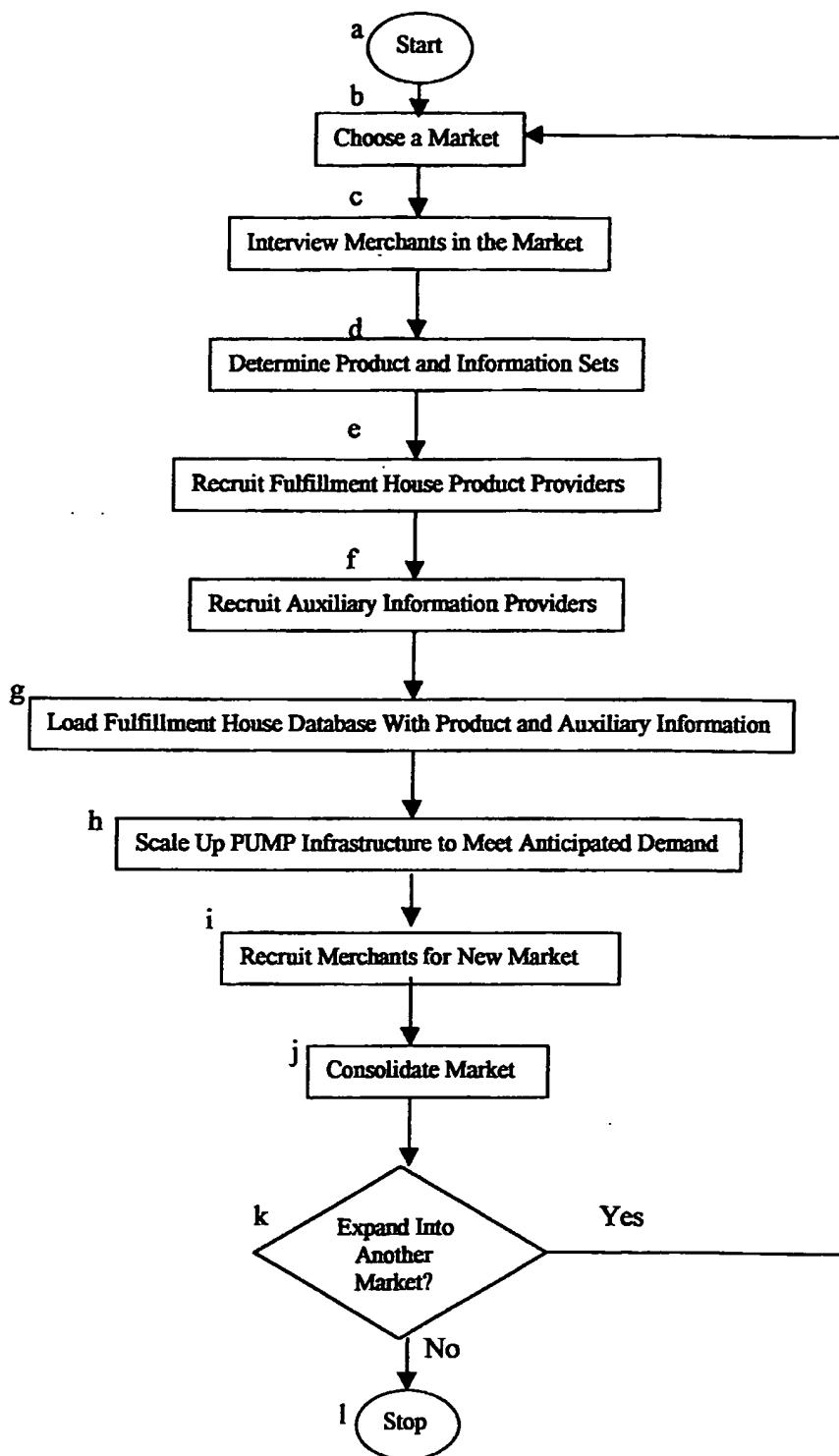


Fig. 17: An Exemplary PUMP Market Development Scenario

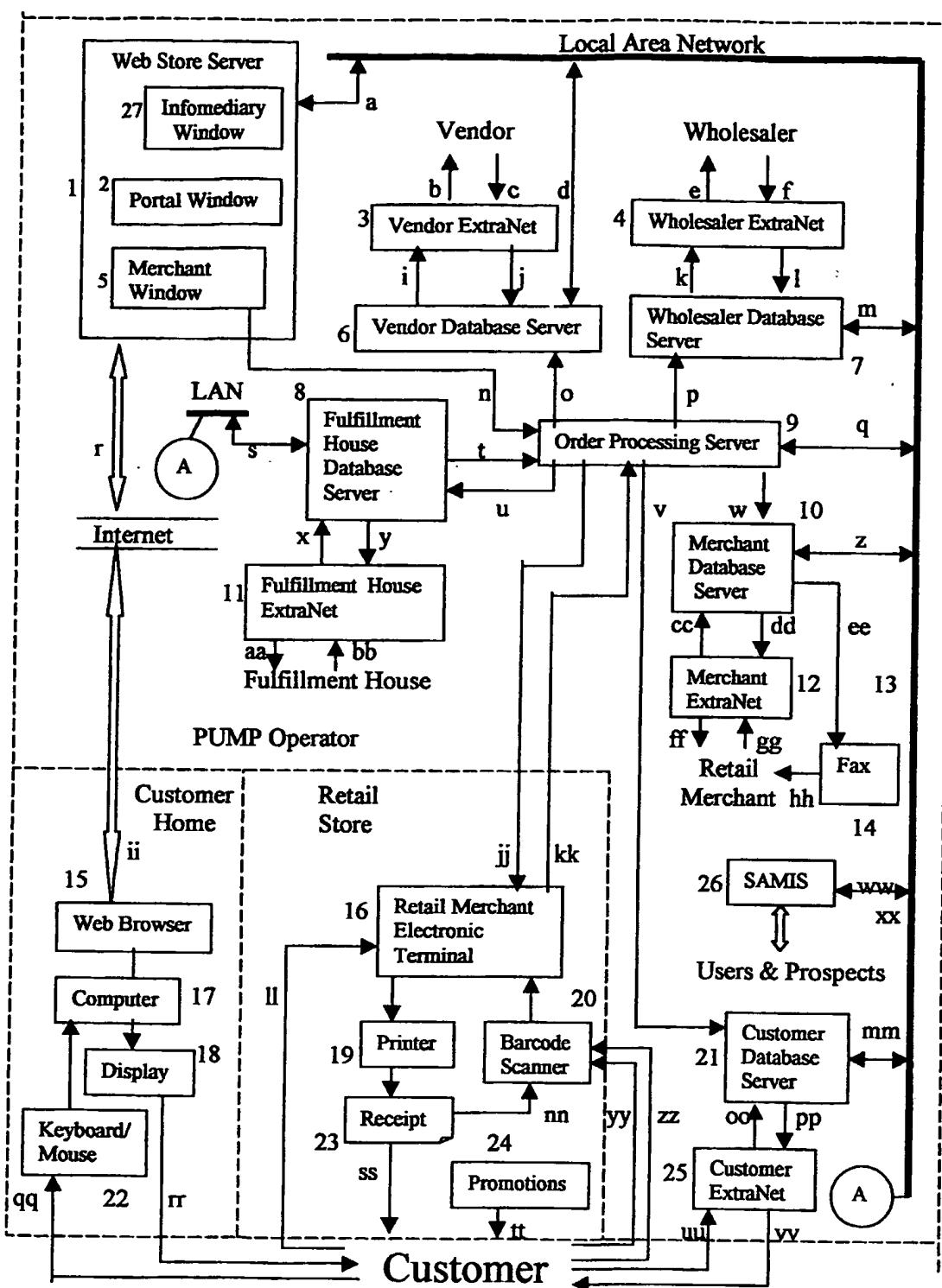


Fig. 18: PUMP PM Infomediary Functional Blocks and Data Flows  
For An Exemplary Embodiment

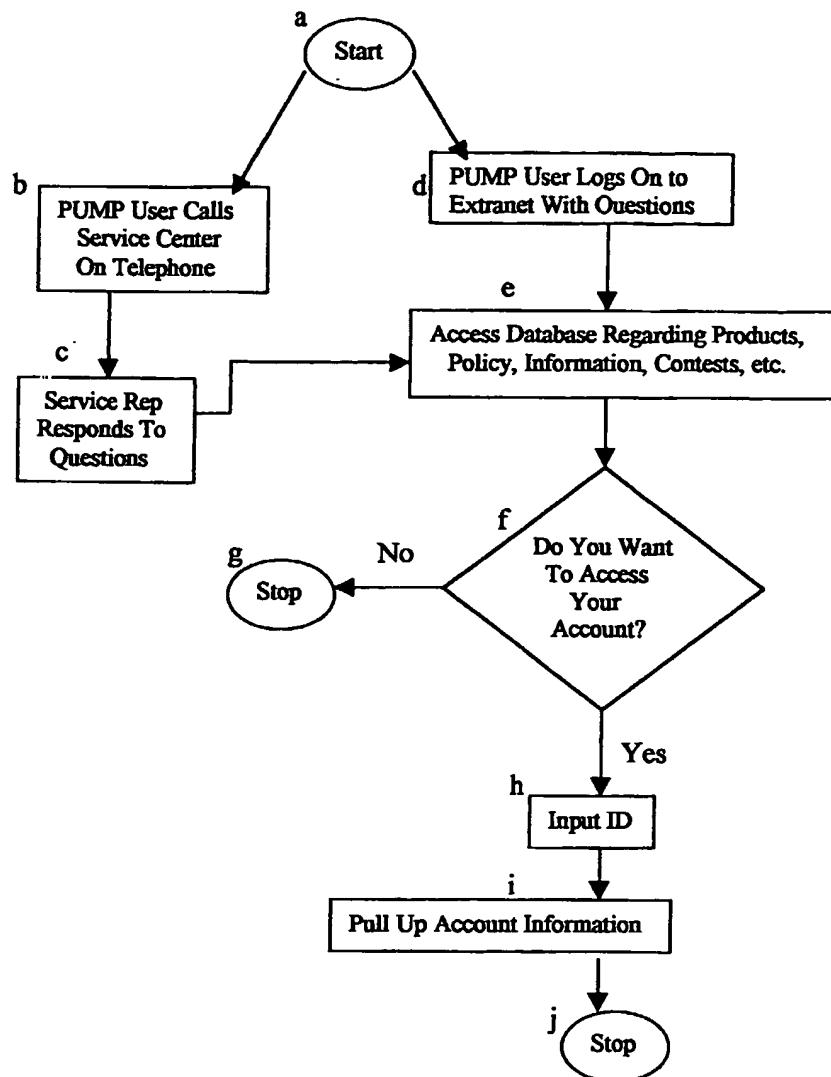


Fig. 19: An Exemplary Embodiment Of A PUMP Users Service Center Process

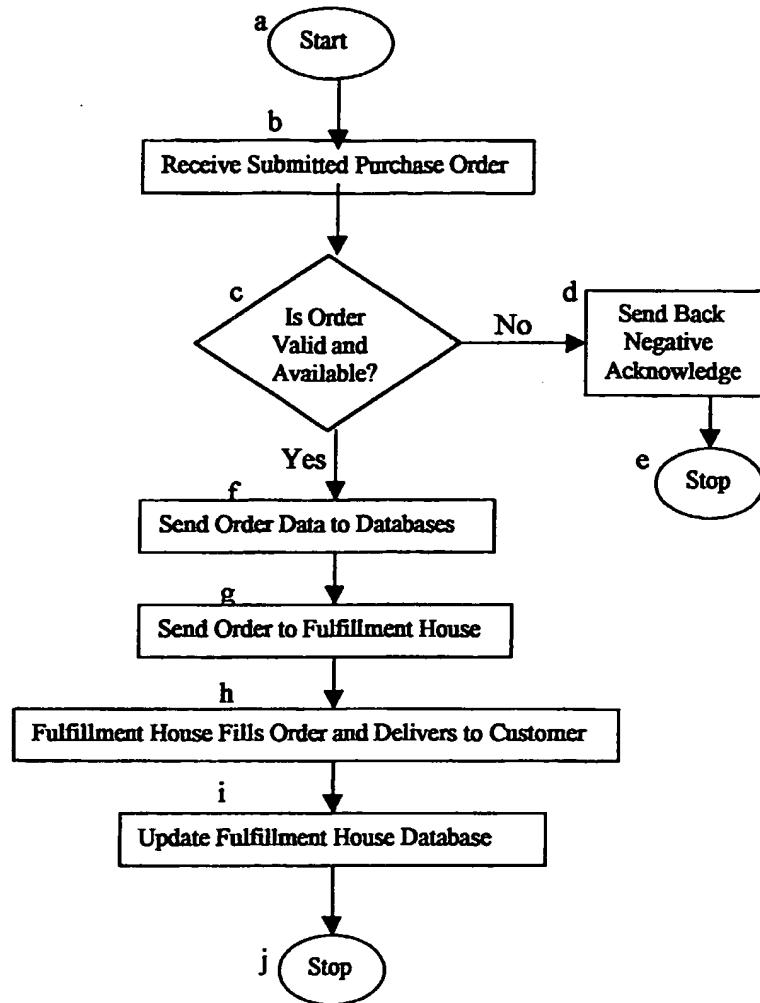


Fig. 20: An Exemplary Embodiment Of An Ordering Process  
Handled By The Order Processing Server (OPS)

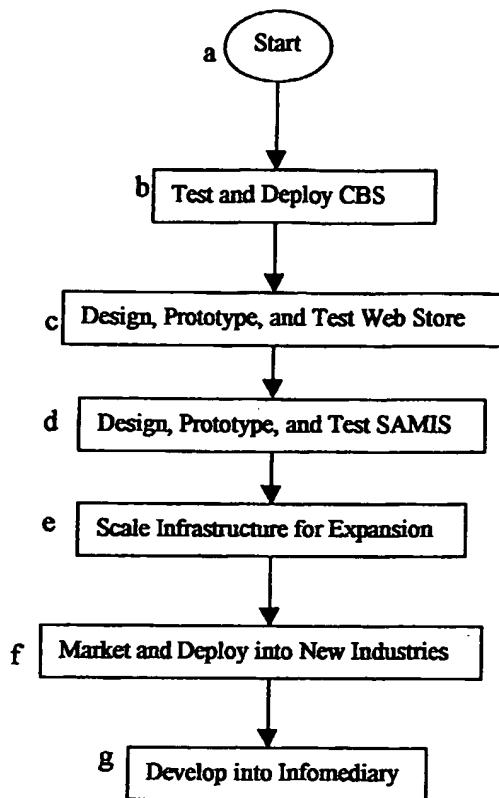


Fig. 21: An Exemplary Embodiment For Implementing  
PUMP Through Its Lifecycle

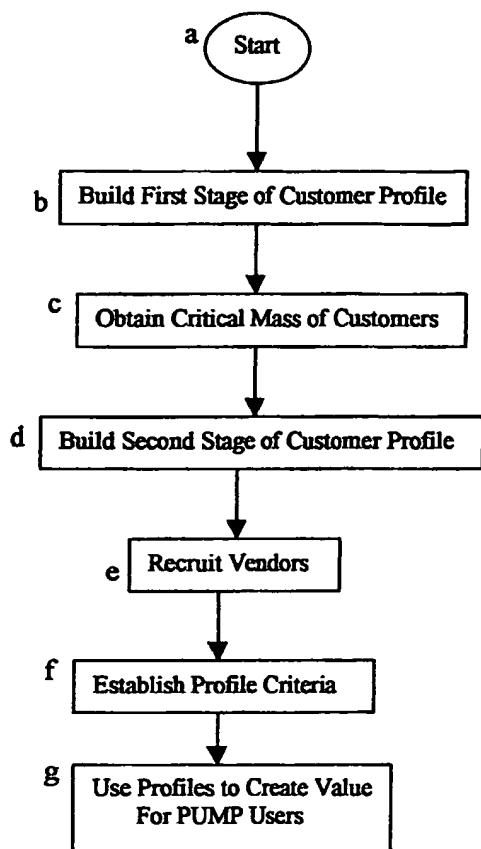


Fig. 22: An Exemplary Embodiment Of A Process For Building  
An Infomediary Business

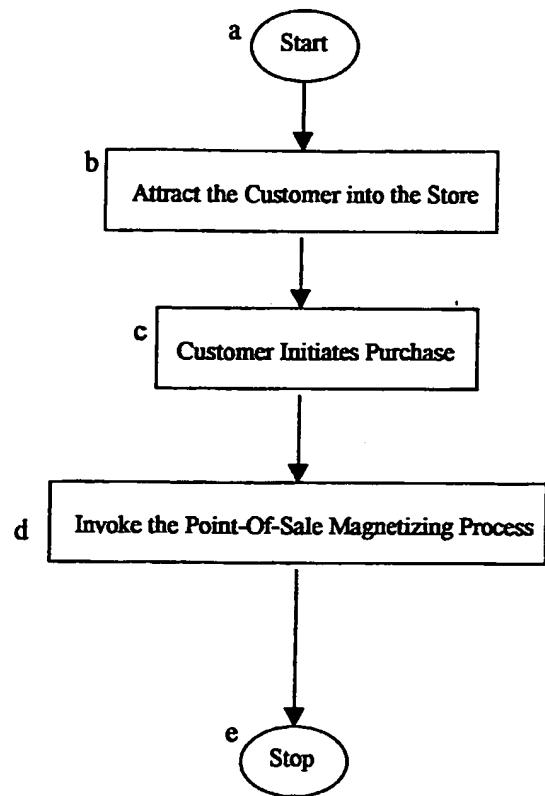


Fig. 23: An Exemplary Embodiment of a PUMP Customer Relationship Management (CRM) Process

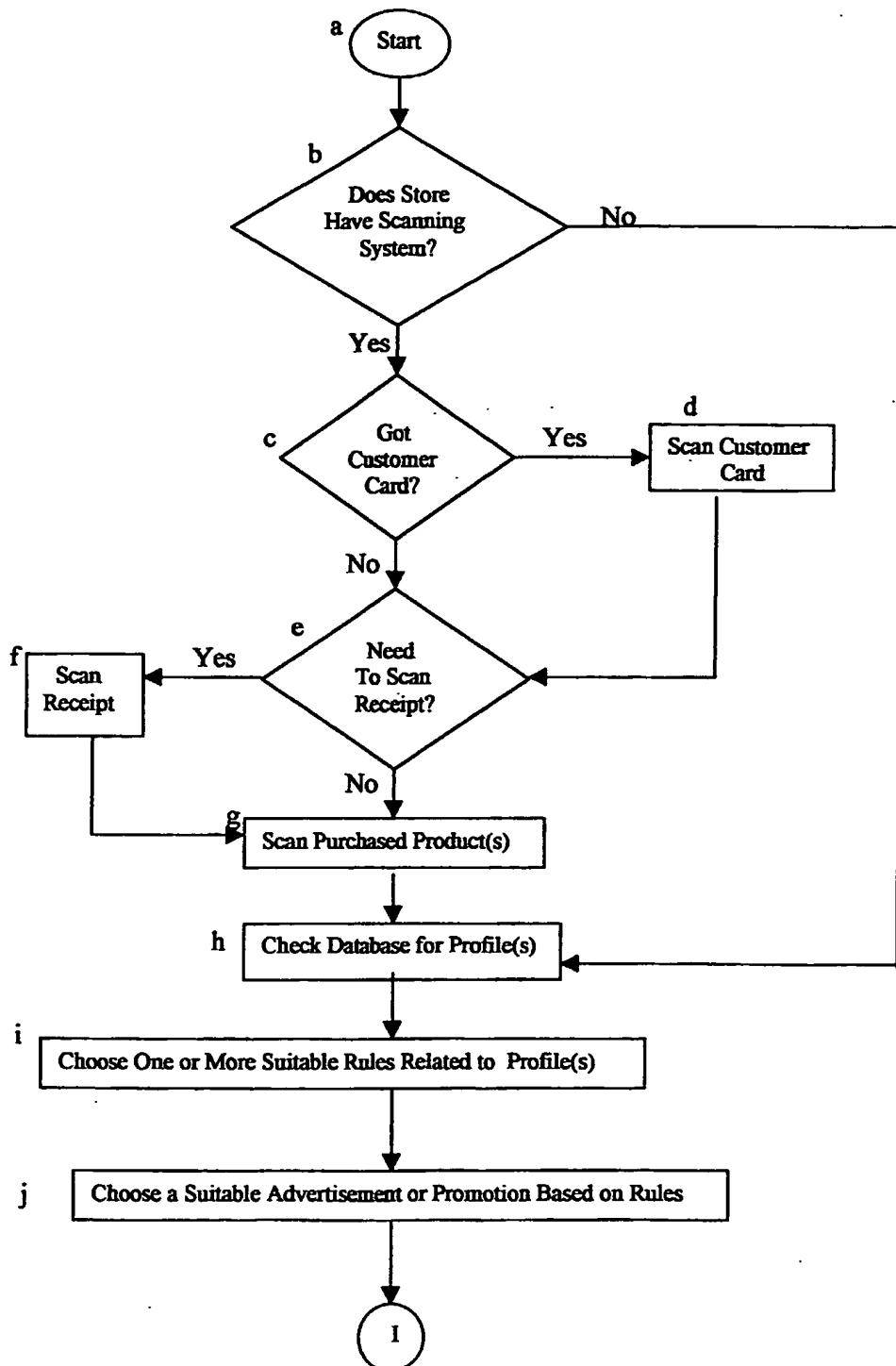


Fig. 24: An Exemplary Embodiment For A PUMP  
Point-Of-Sale (POS) Magnetizing Process

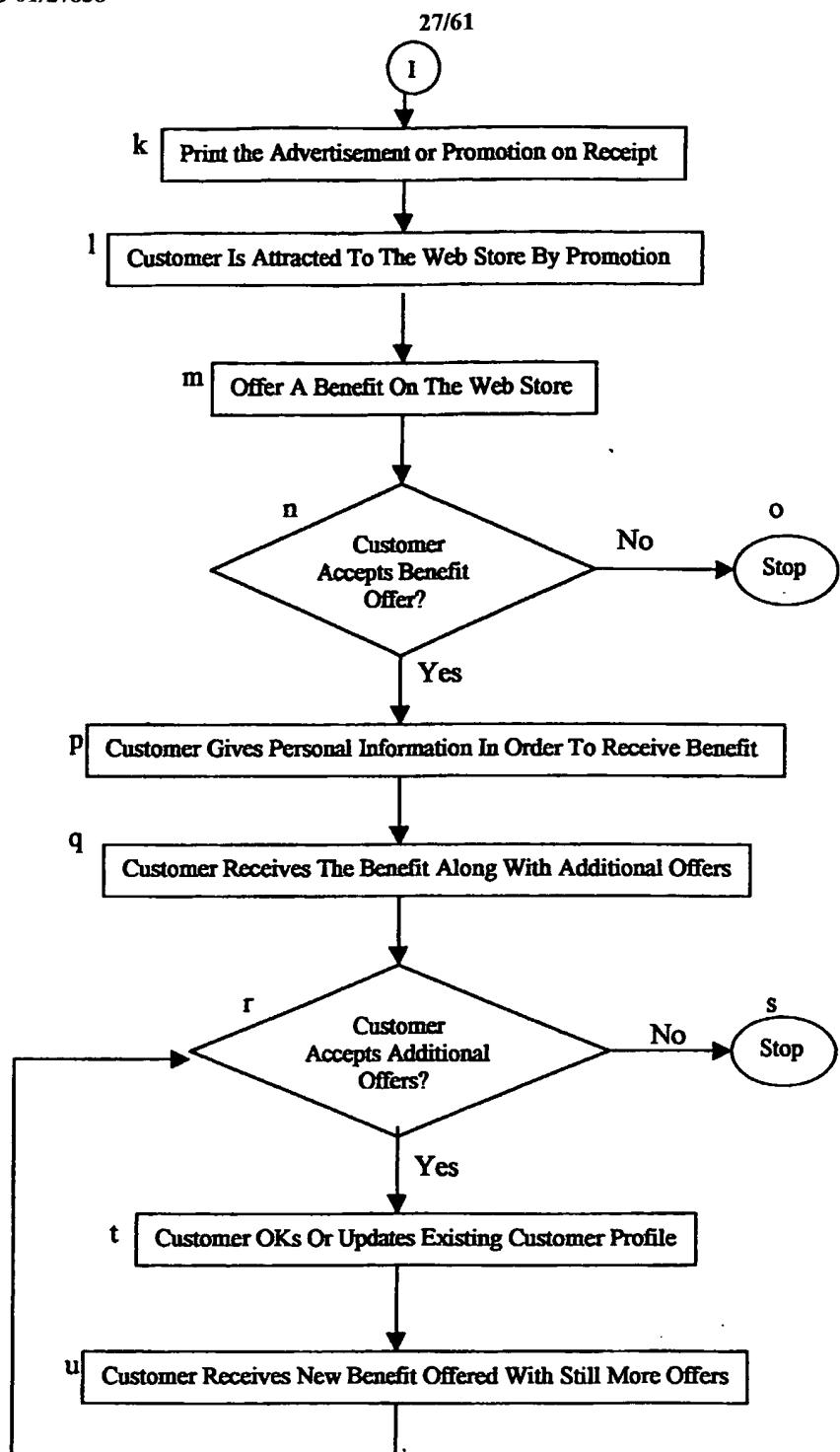


Fig. 24: An Exemplary Embodiment For A PUMP  
POS Magnetizing Process (Continued)

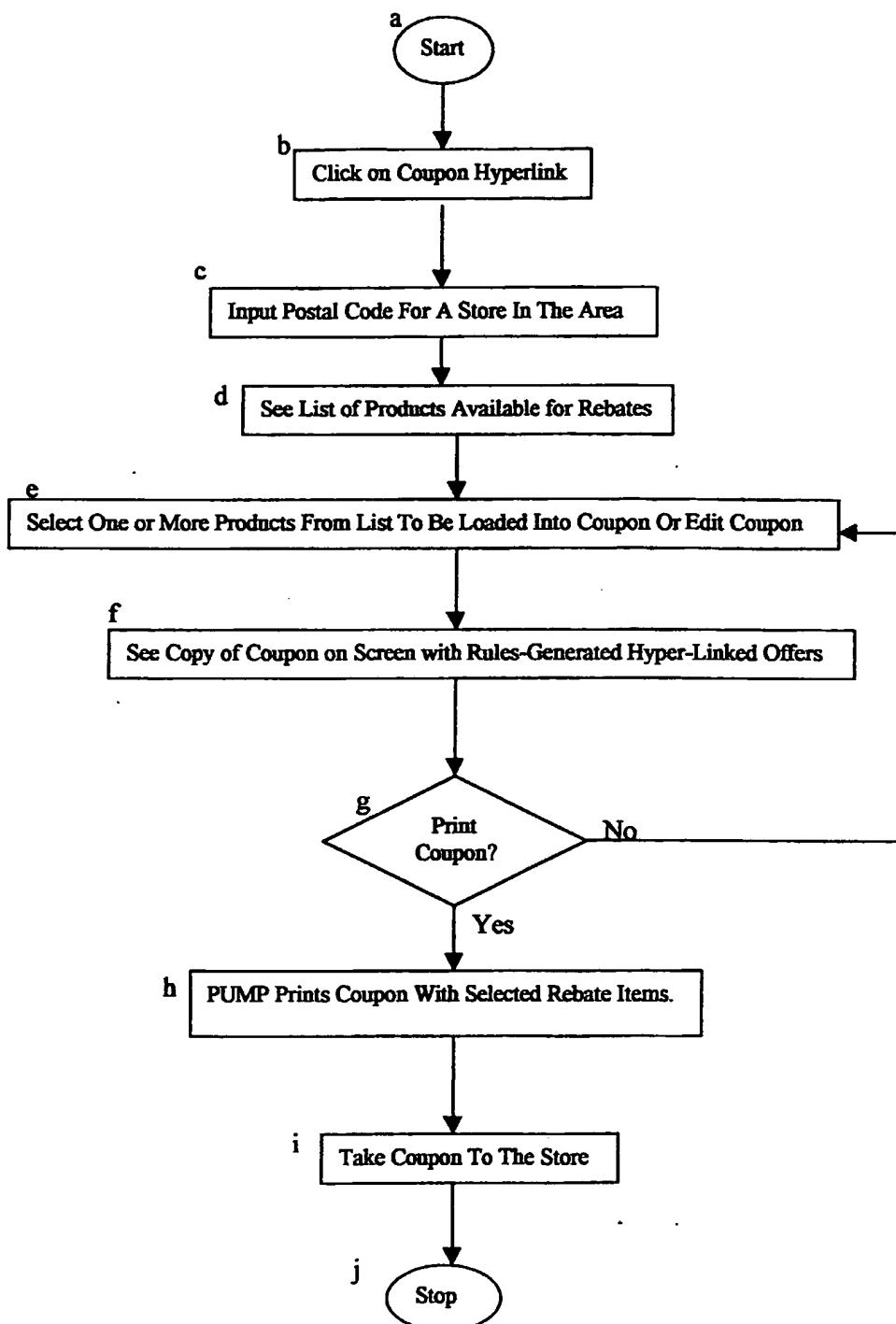


Fig. 25: An Exemplary Embodiment For A PUMP  
Coupon Building Process

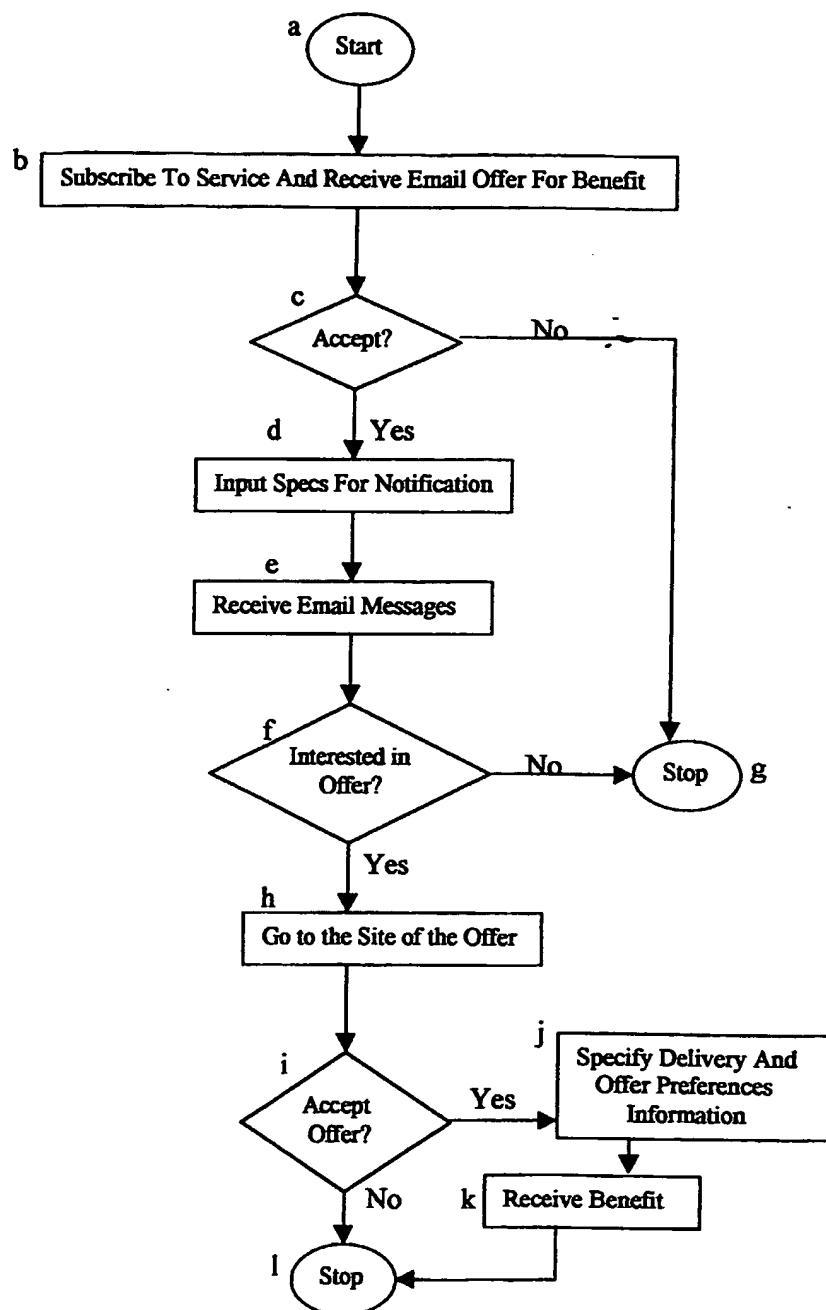


Fig. 26: An Exemplary Embodiment For An  
Email Notification Procedure

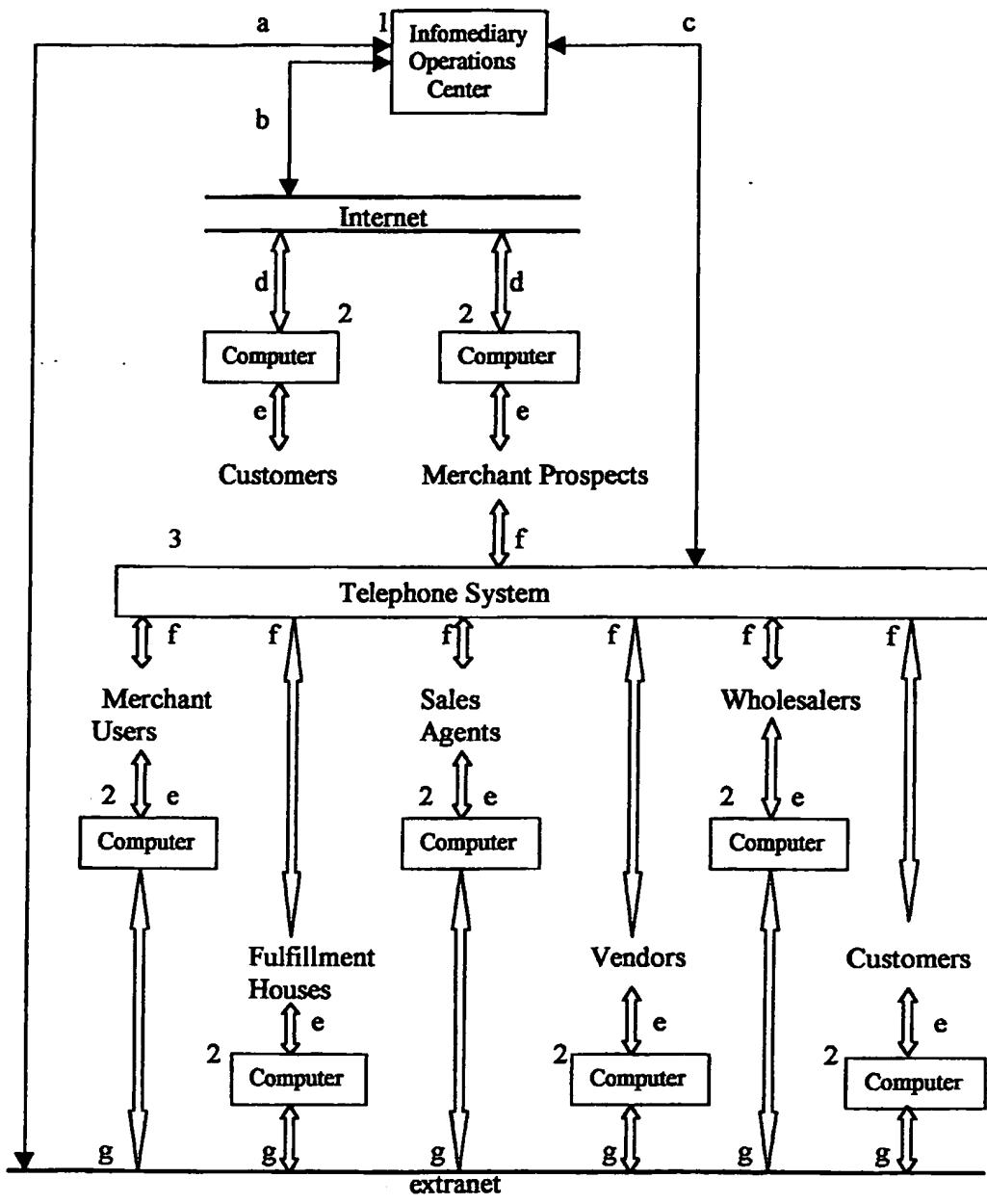


Fig. 27: An Exemplary Embodiment For An Infomediary System

**Web Store Home Page****Merchant Window for Al's Corner Convenience Store**

1

Click on the indicated hyperlinks for the following products and/or services:

- Purchase Prepaid Cellular Airtime for your Cell Phone
- Purchase Other Products and/or Service
- Tips on How to Save Money on Your Phone Bill
- Give Your Family Security With A Cell Phone

2

**Microsoft's Sidewalk Portal Window for Birmingham, Alabama**

Click on the indicated hyperlinks for the following products and/or services:

- Free Resources in Birmingham
- Local Area Stores Having Sales
- Birmingham Community Chat
- Birmingham's Entertainment Guide This Week

3

**Infomediary Window for Mary Smith**

Click on the indicated hyperlinks for the following products and/or services:

- Your Request About Vacations in Mexico
- Your Favorite Sports Teams Results This Week
- New Email News Letters Regarding Your Profession
- Products and Service Matched to Your Indicated Interests
- Change Your Profile

Fig. 28: An Exemplary Embodiment of a Web Store Home Page

Sidewalk Yellow pages: birmingham. sidewalk

## *Sidewalk Birmingham*

[Home page](#)   [Yellow pages](#)   [Buyer's guide](#)   [Entertainment guide](#)   [Your favorites](#)   [Help](#)

[go to msn.com](#)

### **Browse categories YELLOW PAGES**

[Automotive](#)

[Community](#)

[Dining](#)

[Electronics](#)

[Entertainment](#)

[Finance](#)

[Health & fitness](#)

[Home & garden Services](#)

[Sports & recreation](#)

[Stores](#)

[Travel](#)

### **Your last searches**

[plumbing services](#)

[nearest your home](#)

[Send us feedback](#)

### **1. Business name or type**

Search for: \_\_\_\_\_

### **2. Location**

- Closest to my home, my work, other (choose one)
- City & state
- Online merchants
- Neighborhood

### **3. Go (Begin search)**

[Home page](#)   [Yellow pages](#)   [Buyer's guide](#)   [Entertainment guide](#)   [Your favorites](#)   [Help](#)

The place to get stuff done on the web, [WWW.MSN.COM](#)

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**Fig. 29: An Exemplary Embodiment of the Home Page of an Internet Portal Company**

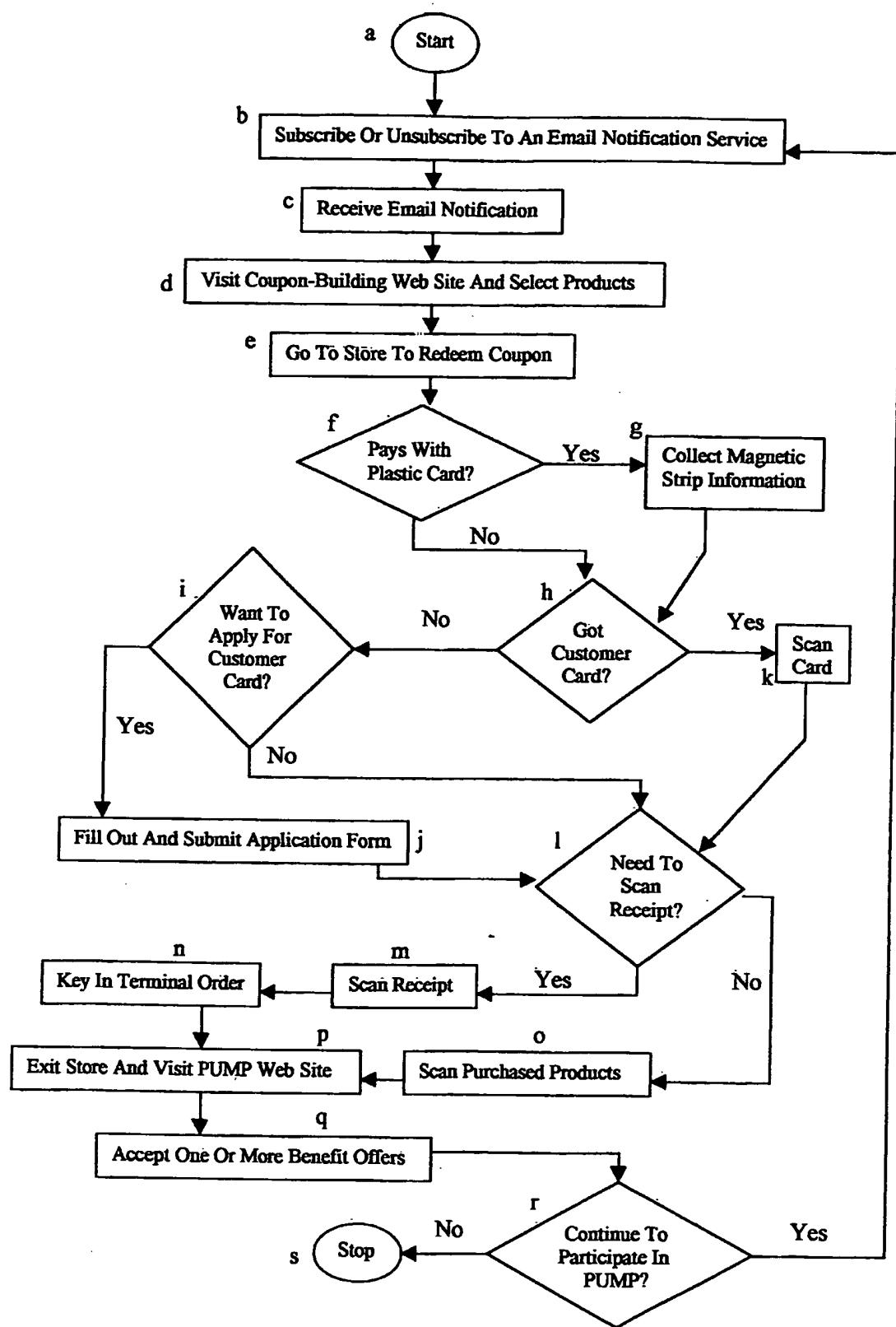


Fig. 30: An Exemplary Embodiment of the Customer Profile Building Process

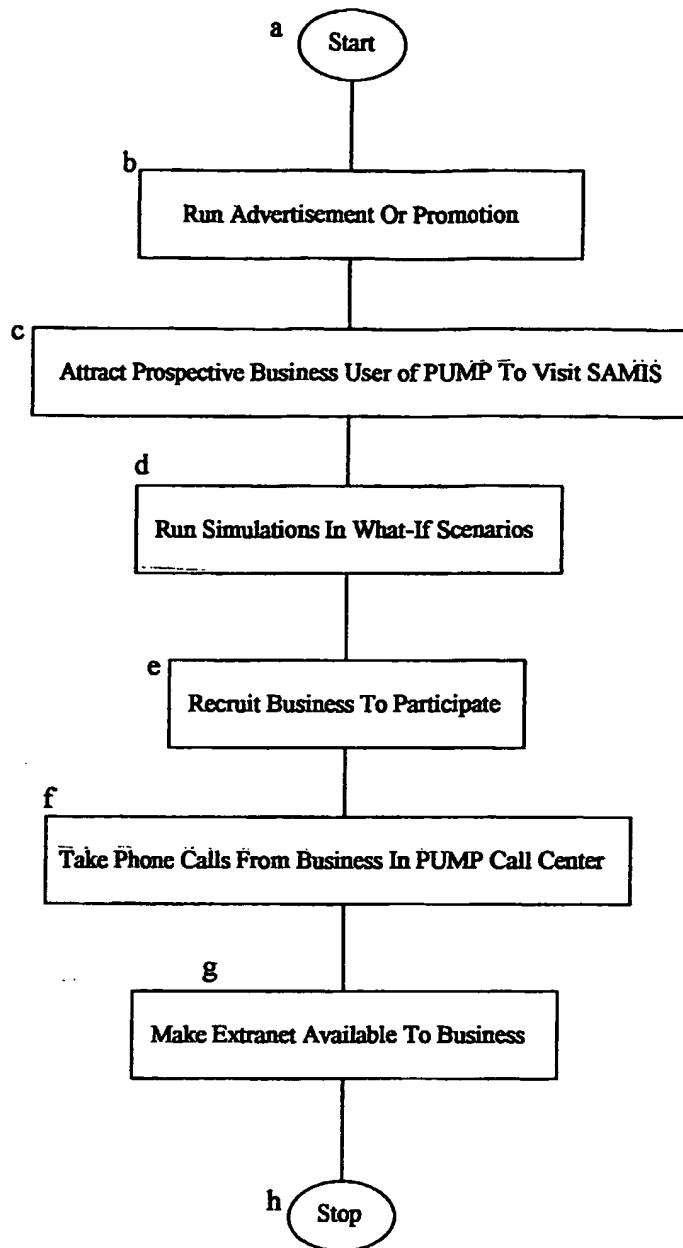


Fig. 31: An Exemplary Embodiment of the Profile Building  
Process of PUMP Business Users

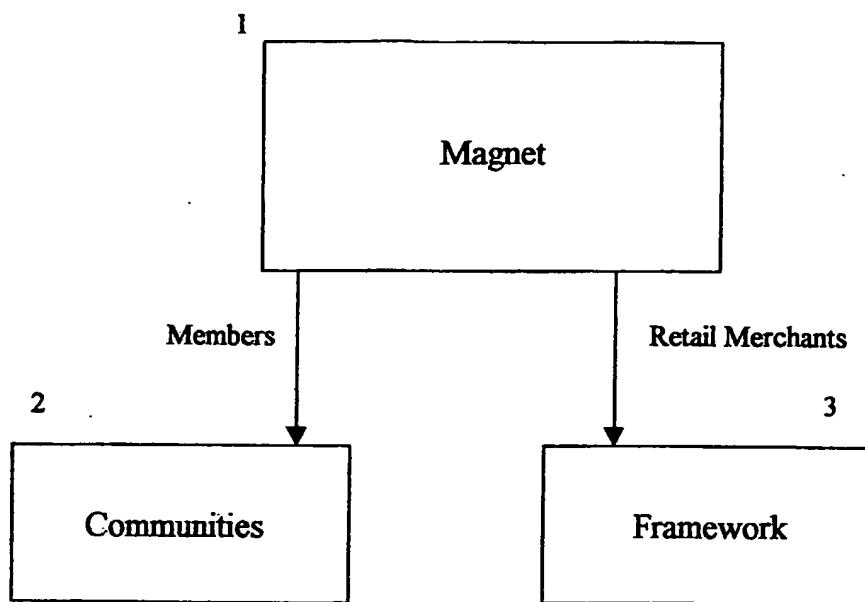


Fig. 32: Exemplary ICE System

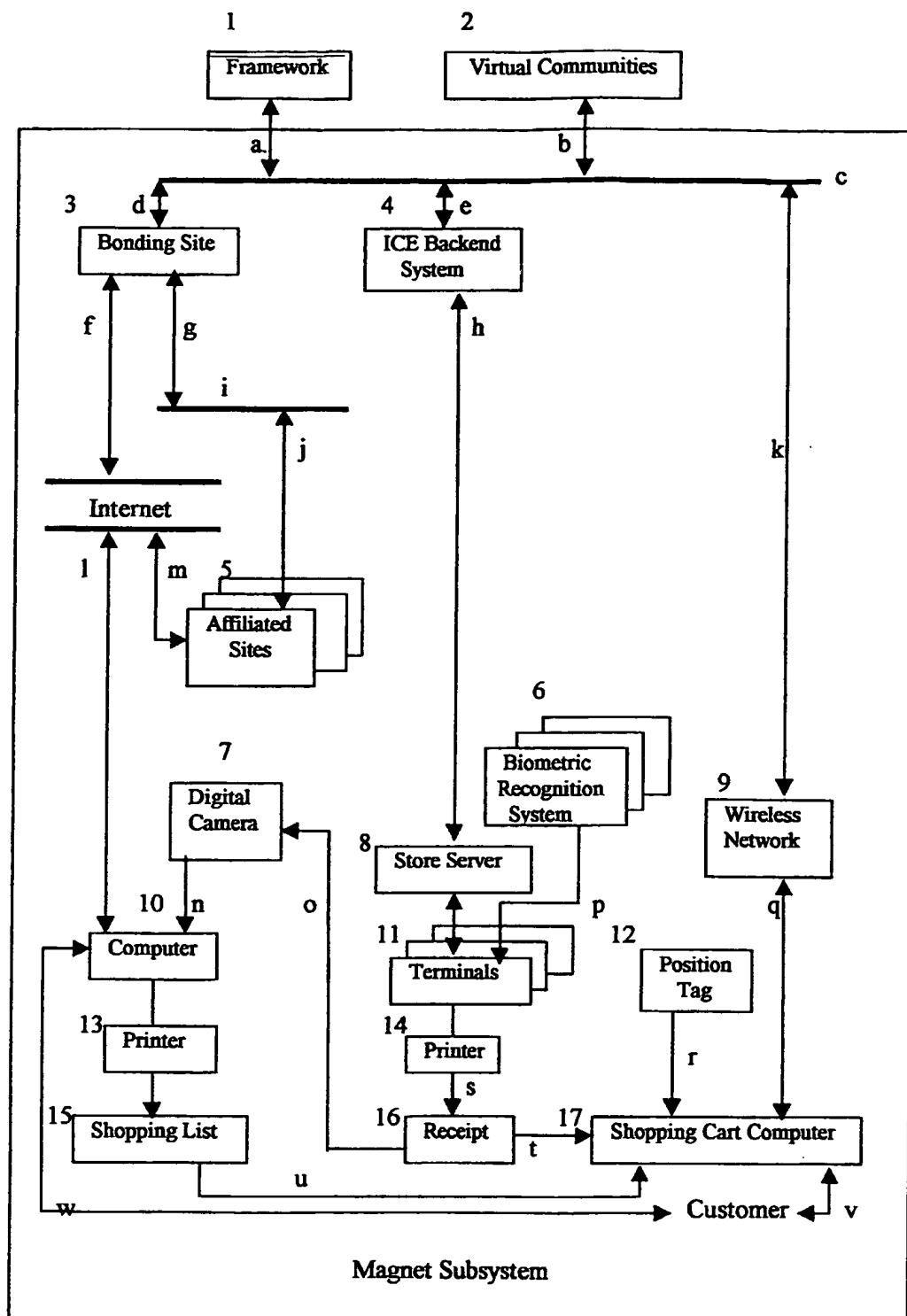


Fig. 33: Exemplary Magnet Subsystem

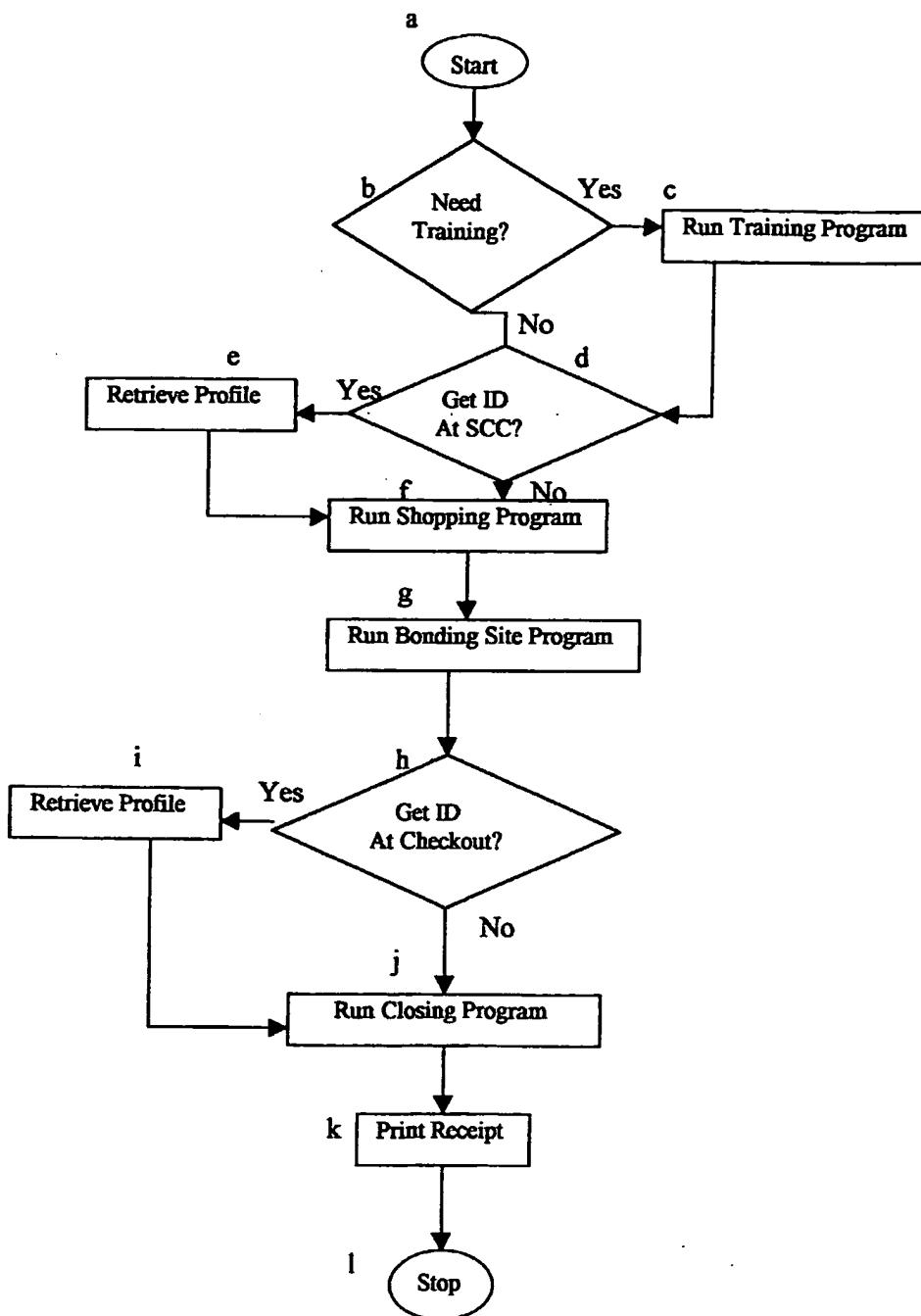


Fig. 34: Exemplary ICE Magnet Process

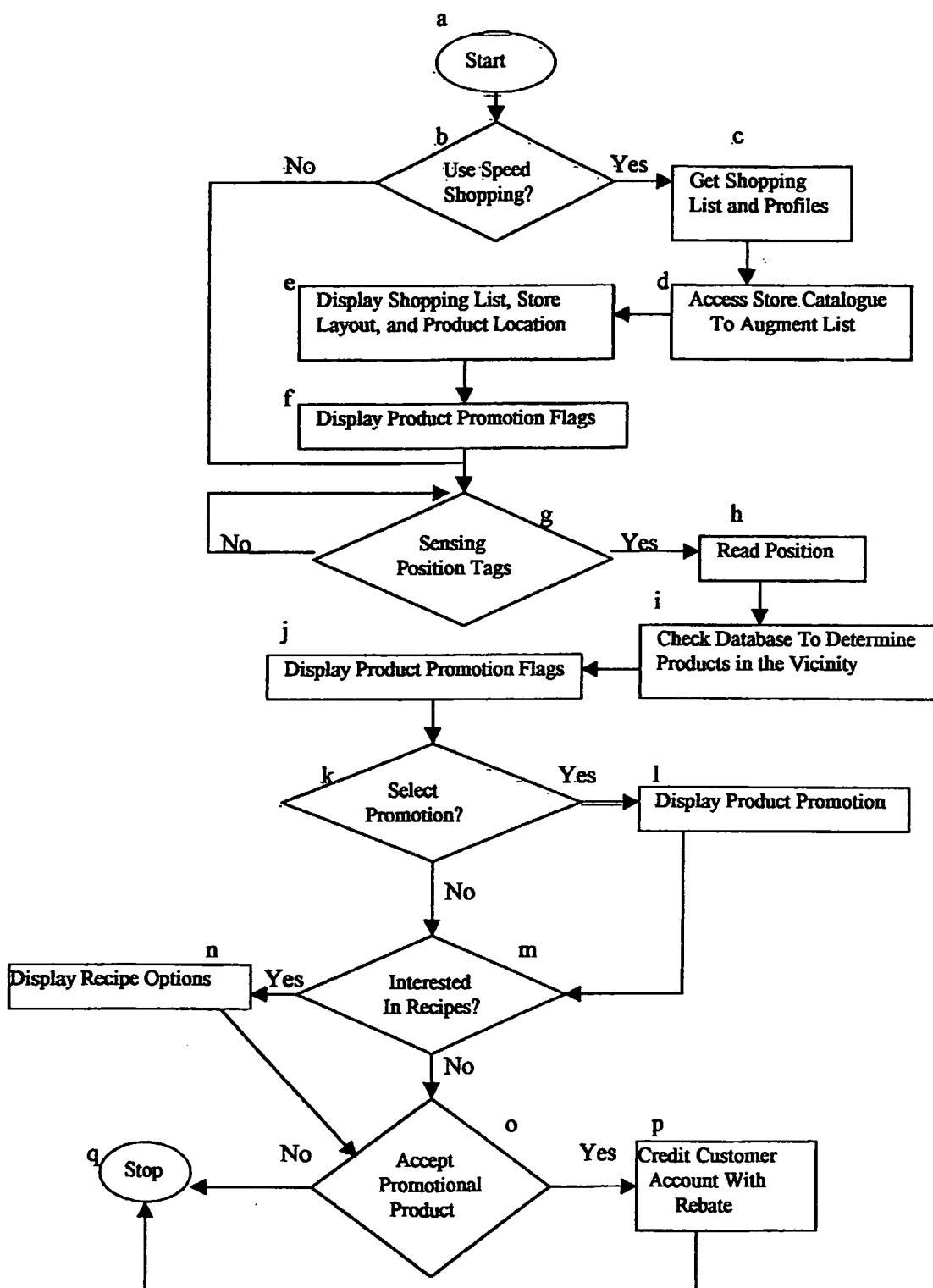


Fig. 35: Exemplary Shopping Program Process

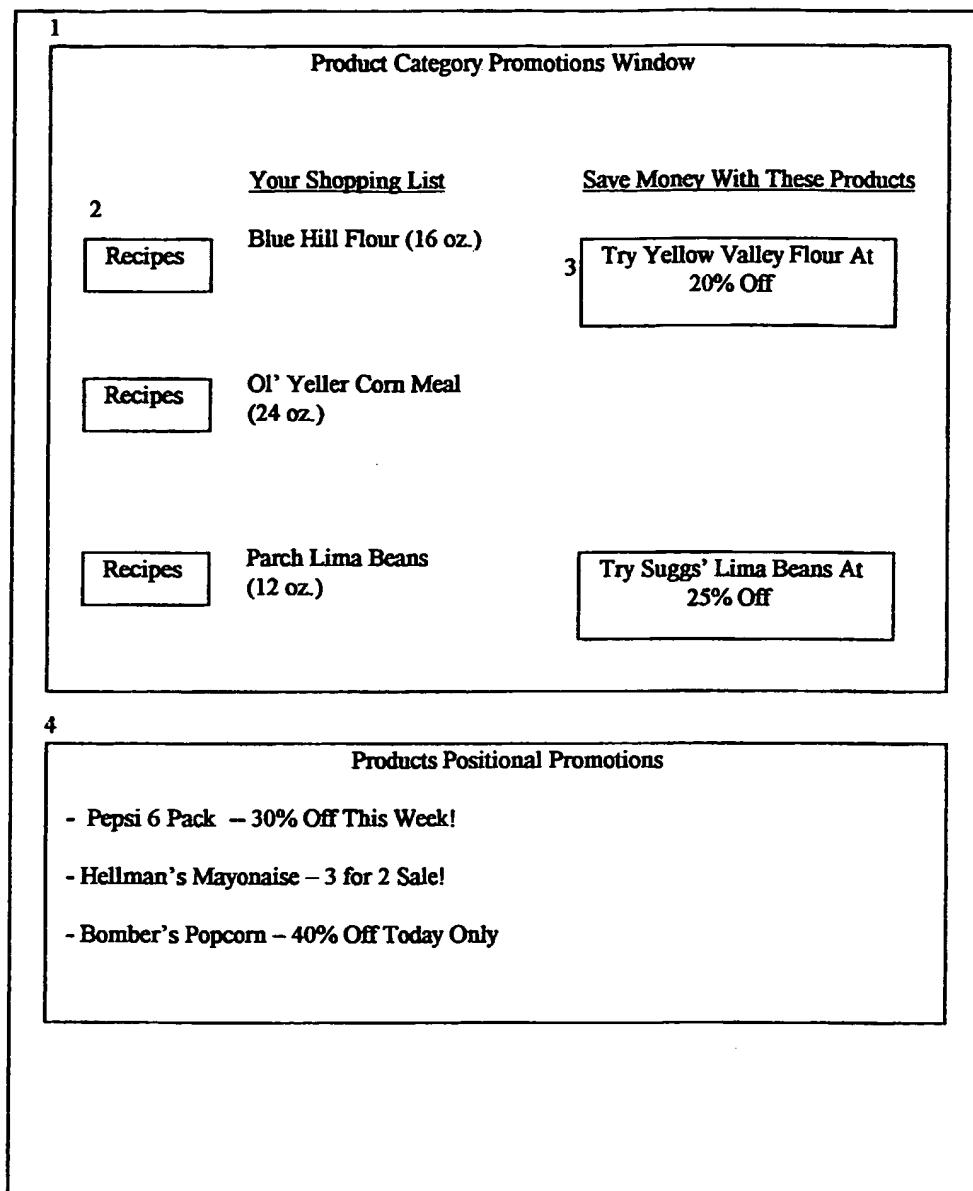


Fig. 36: Exemplary Promotional Message Shopping Cart Computer Screen

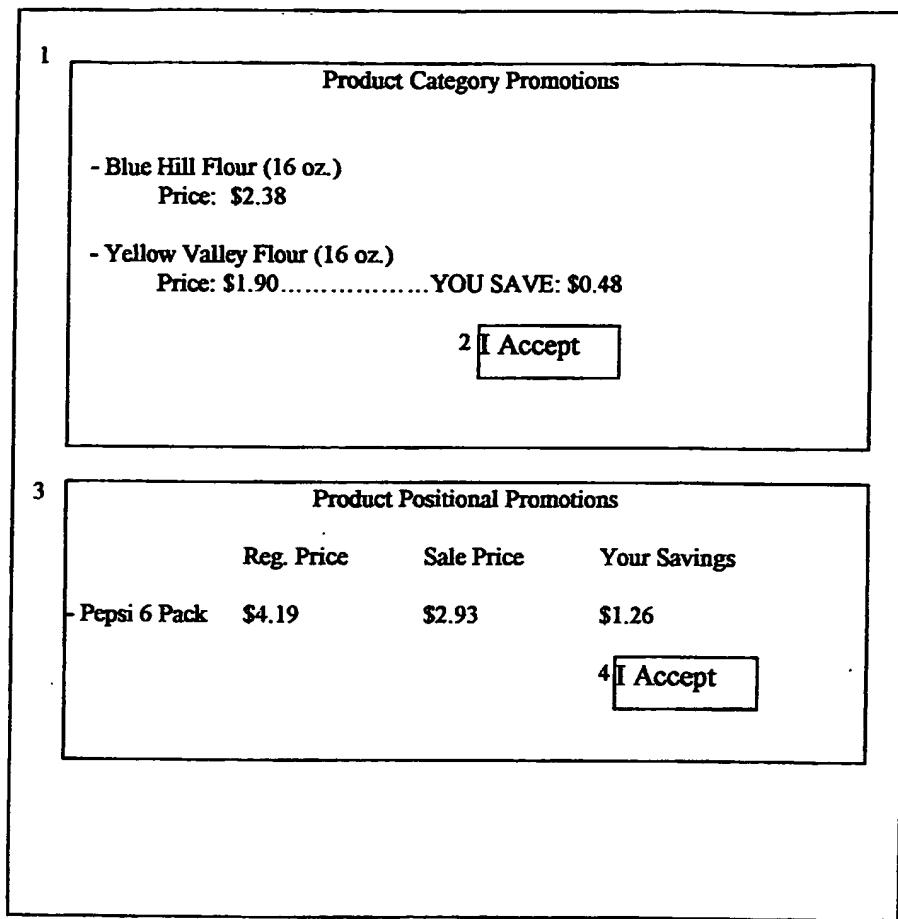


Fig. 37: Product Promotional Message Screen

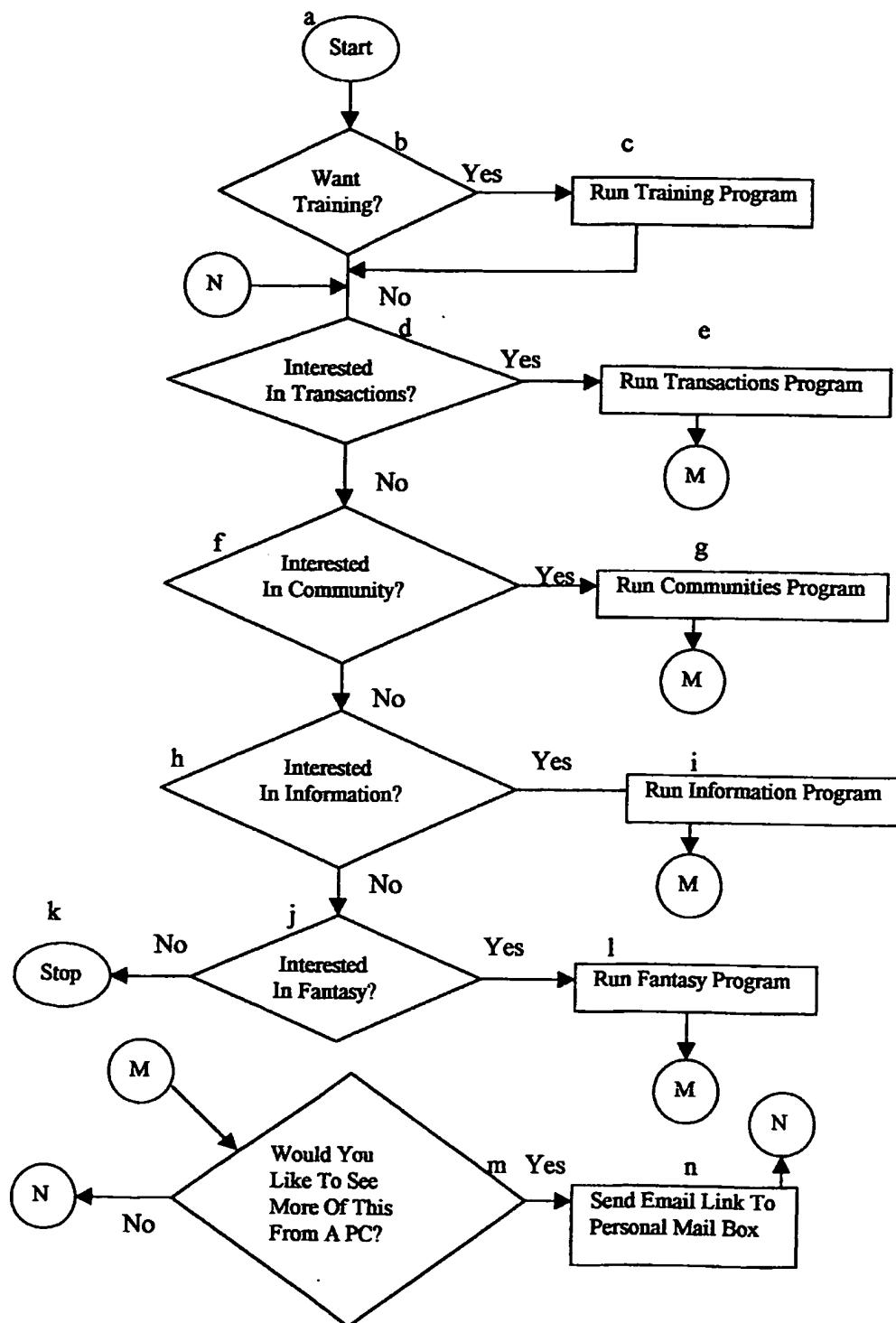


Fig. 38: Exemplary Bonding Site Programs Process

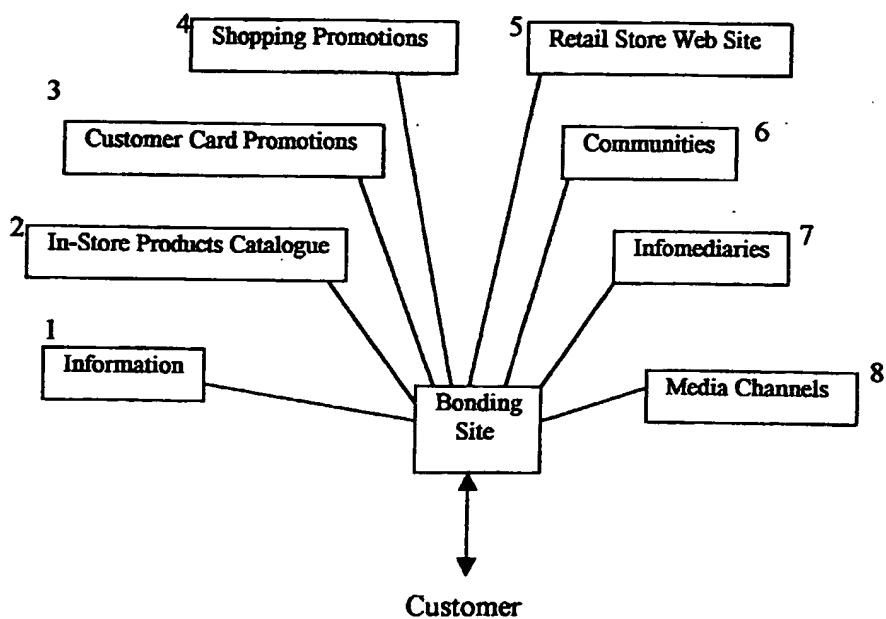


Fig. 39: Exemplary Bonding Site Promotions

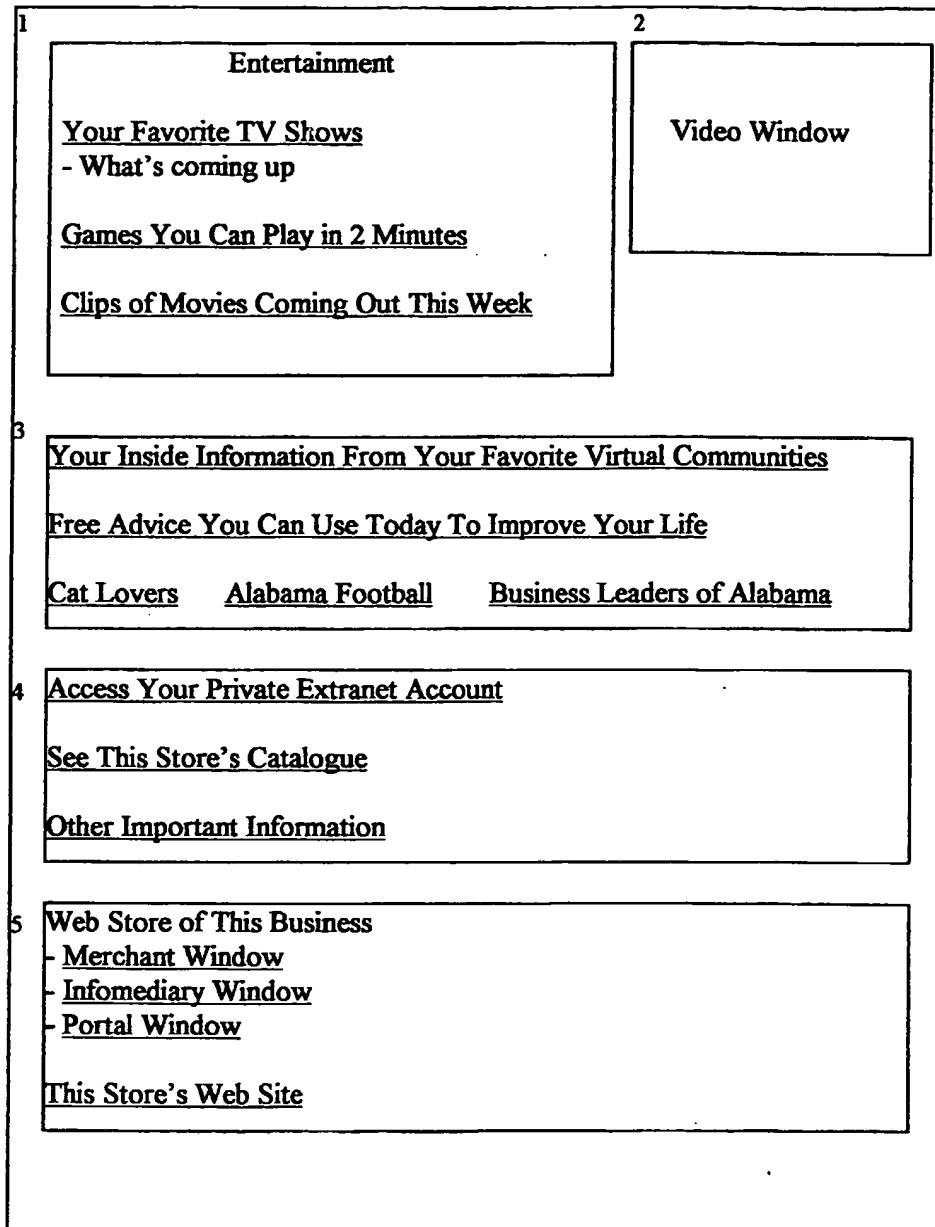


Fig. 40 : An Exemplary Bonding Site Screen

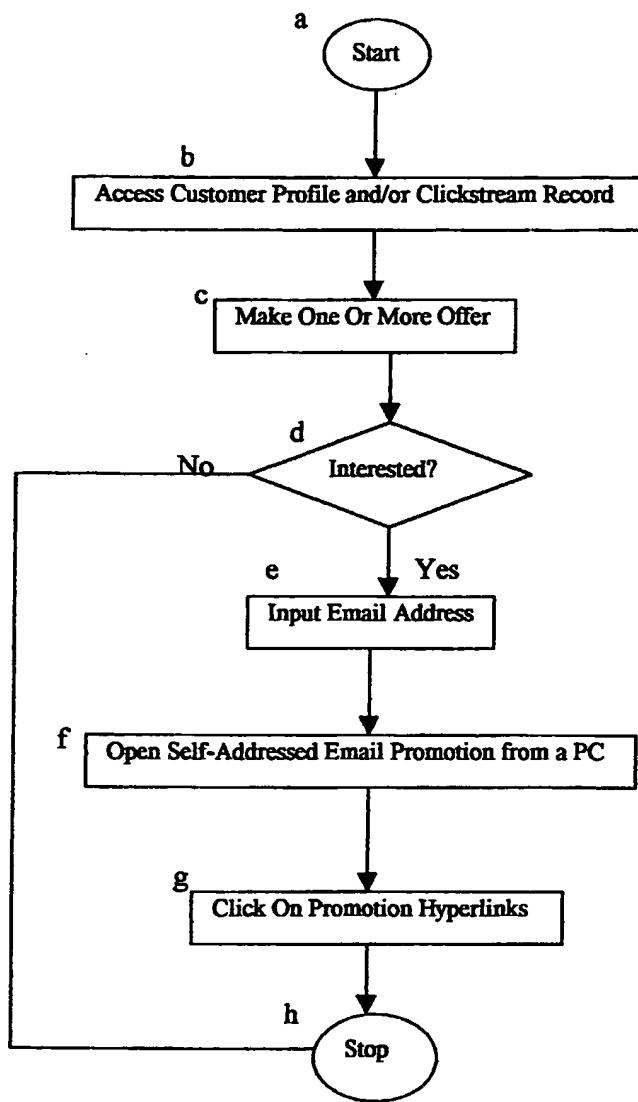


Fig. 41: Exemplary Self-Addresses Promotional Email Process

Promotional Email Messages

Thank you for shopping at AllStar Supermarket!

- a. You expressed interest in a television program about Alabama's next football game. I want to watch the program. Would you like to see a list of programs about this year's team? Yes!
- b. You expressed interest in a online community of pedigree cat owners. Would you like to see a sample of discussions from this week? Yes! How do I join the community?
- c. Save time on your next grocery shopping trip by using the Speed Shopping Program. Show me how.
- d. You have 671 value points accumulated in our shopping contest. You can spend them at any time. Want to know how?
- e. Report on schools in the Birmingham area. How does my child's school measure up?
- f. Our average shopper that uses a Customer Card saves \$43 per year. How can I save money?

Fig. 42: Exemplary Promotional Email Received on a PC Screen

1

**You Buy:**

1. Any barcoded product

**The System Knows About You:**

1. What you buy today and (provided you've been using a loyalty card) your consumer history in the profile record.

**The Rule Is:**

1. Offer a benefit which is matched to profile

**The Example Promotion Reads:**

1. "Now you can have [benefit] at [www.BondingSite.com](http://www.BondingSite.com)

2

**You Buy:**

1. Dog food and a flea collar

**The System Knows About You:**

1. You have a dog and a concern about fleas.

**2. Cat Immunization Kit**

2. You have a cat and a concern about cat health issues (e.g., worms, rabies)

**The Rule Is:**

1. Offer information regarding safeguarding against fleas and dog issues.

**The Example Promotion Reads:**

1. "See how to keep your dog flea-free and healthy this summer on Dog-Track Email Newsletter. It's Free! Sign up at [www.OurWebSite.com](http://www.OurWebSite.com)

2. Offer information regarding health, nutrition, and safety tips for cats.

2. "Keep your cat worm free. Visit our archives of health tips by Vet Corner expert Dr. Robert Johnson at [www.OurCatSite.com](http://www.OurCatSite.com). It's Free!"

Fig. 43: Exemplary Rules-Based Promotions

1	Barber's Choc \$3.48 Ice Cr. 16 oz
	Custard's Dog \$6.75 Food, 24 oz.
	Maxine Flea \$2.79 Collar
	Tax \$1.04
	Total \$14.06

2 See how to keep your dog flea-free and healthy this summer on Dog-Track Email Newsletter. It's Free!

Sign up at [www.OurWebSite.com](http://www.OurWebSite.com)

Choose the pet programming of your choice at [www.OurBondingSite.com](http://www.OurBondingSite.com)

3 Use this barcode to take you to your favorite topics:

4  BARCODE

Fig. 44: Exemplary Promotional Sales Receipt

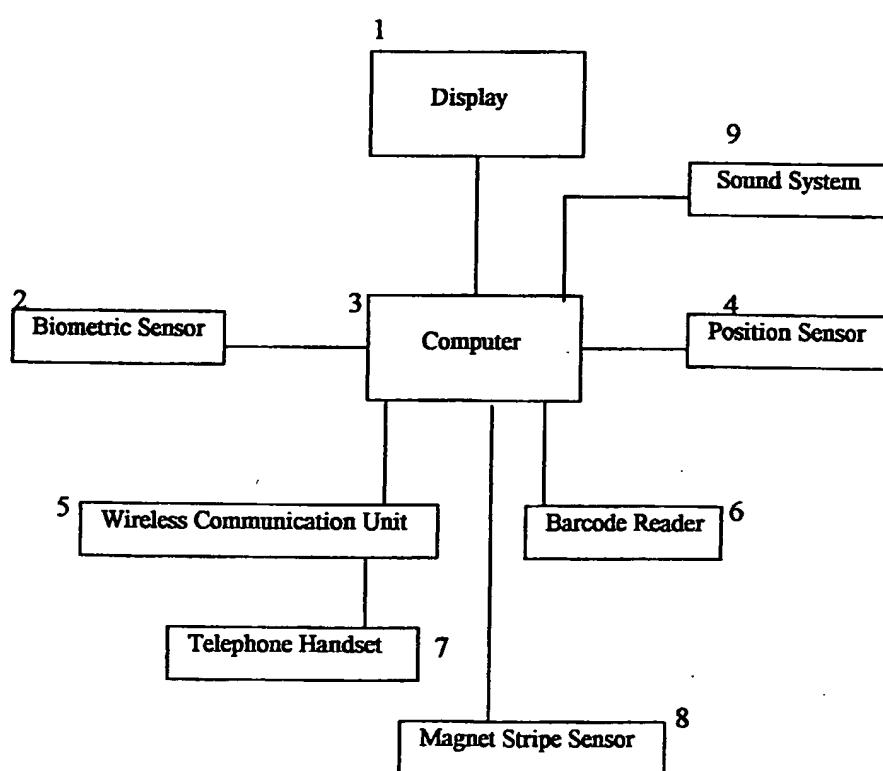


Fig. 45: Exemplary Shopping Cart Computer Subsystem

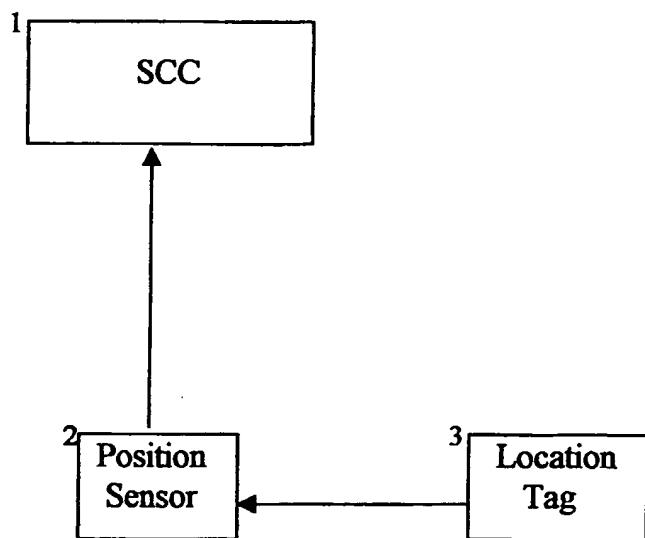


Fig. 46: Exemplary Position Sensor

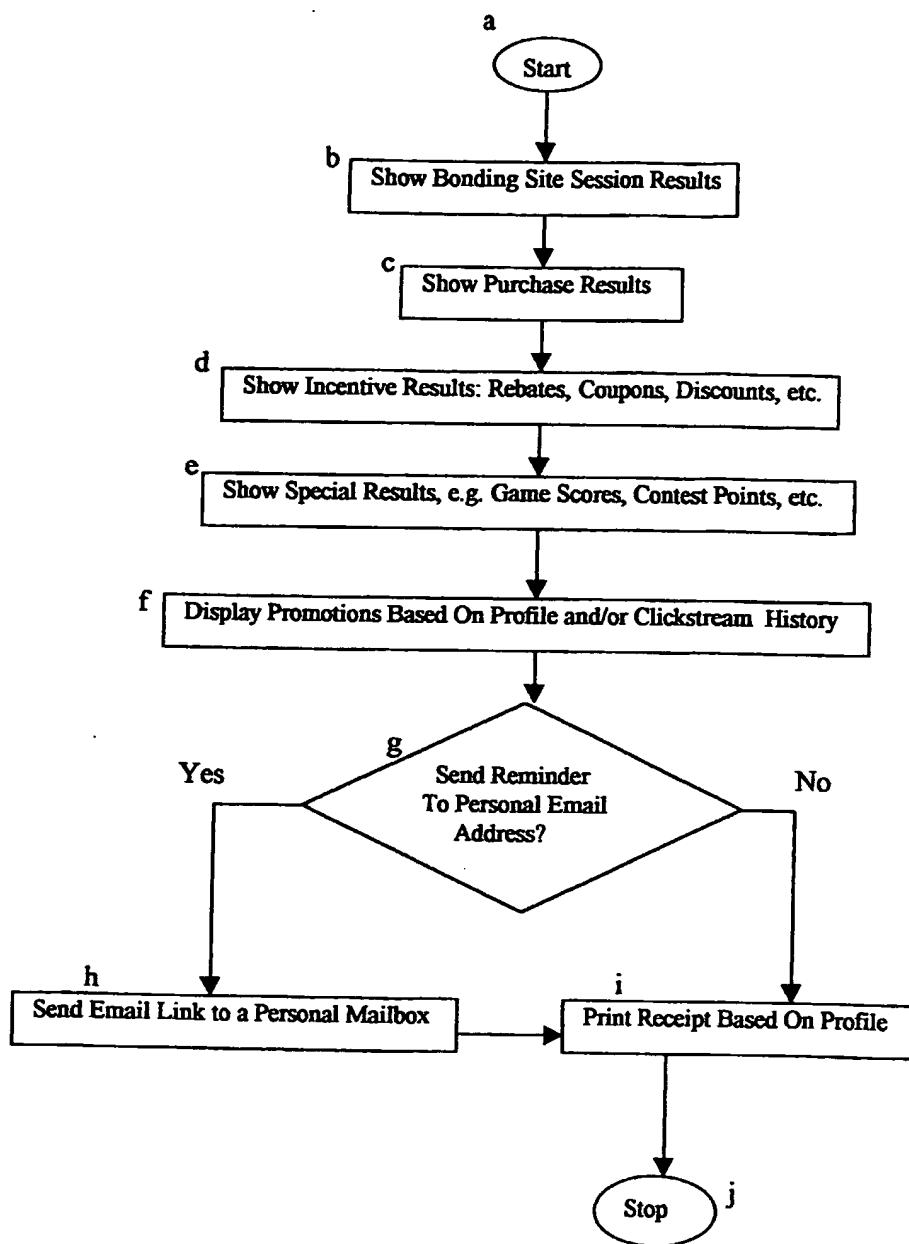


Fig. 47: Exemplary Closing Program Process

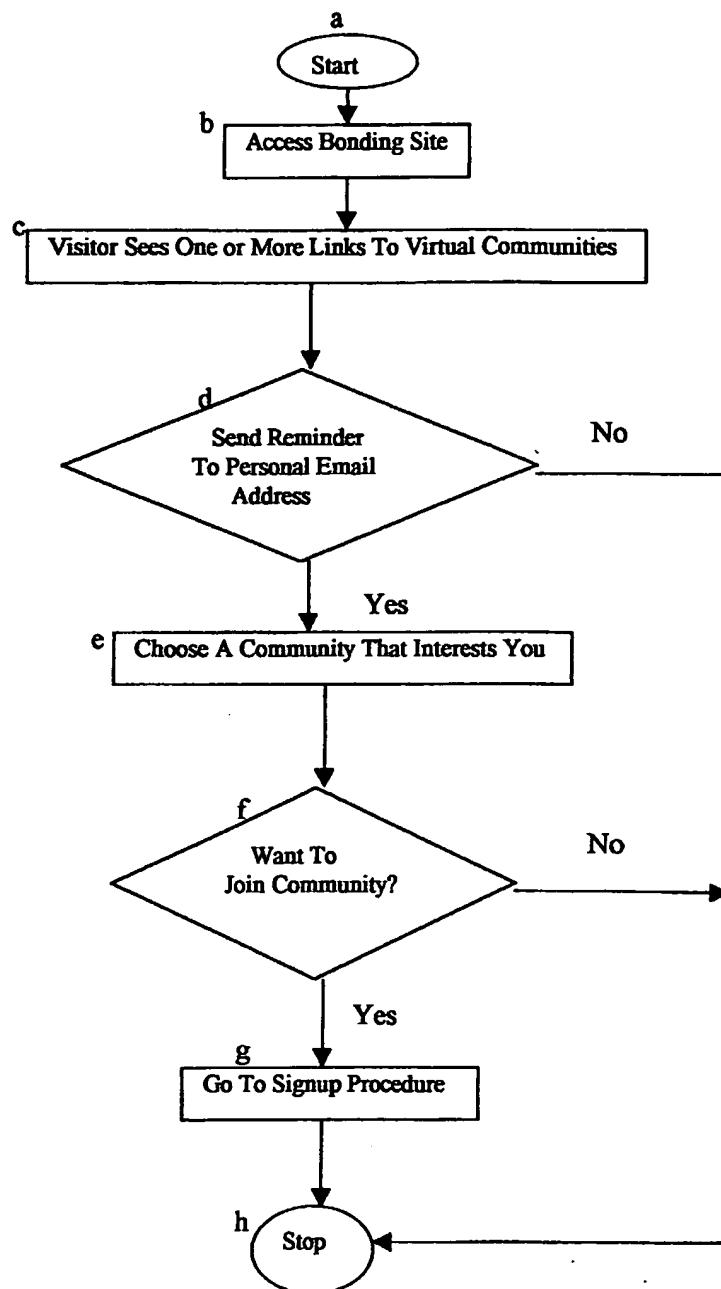


Fig. 48: Exemplary Community Building Process

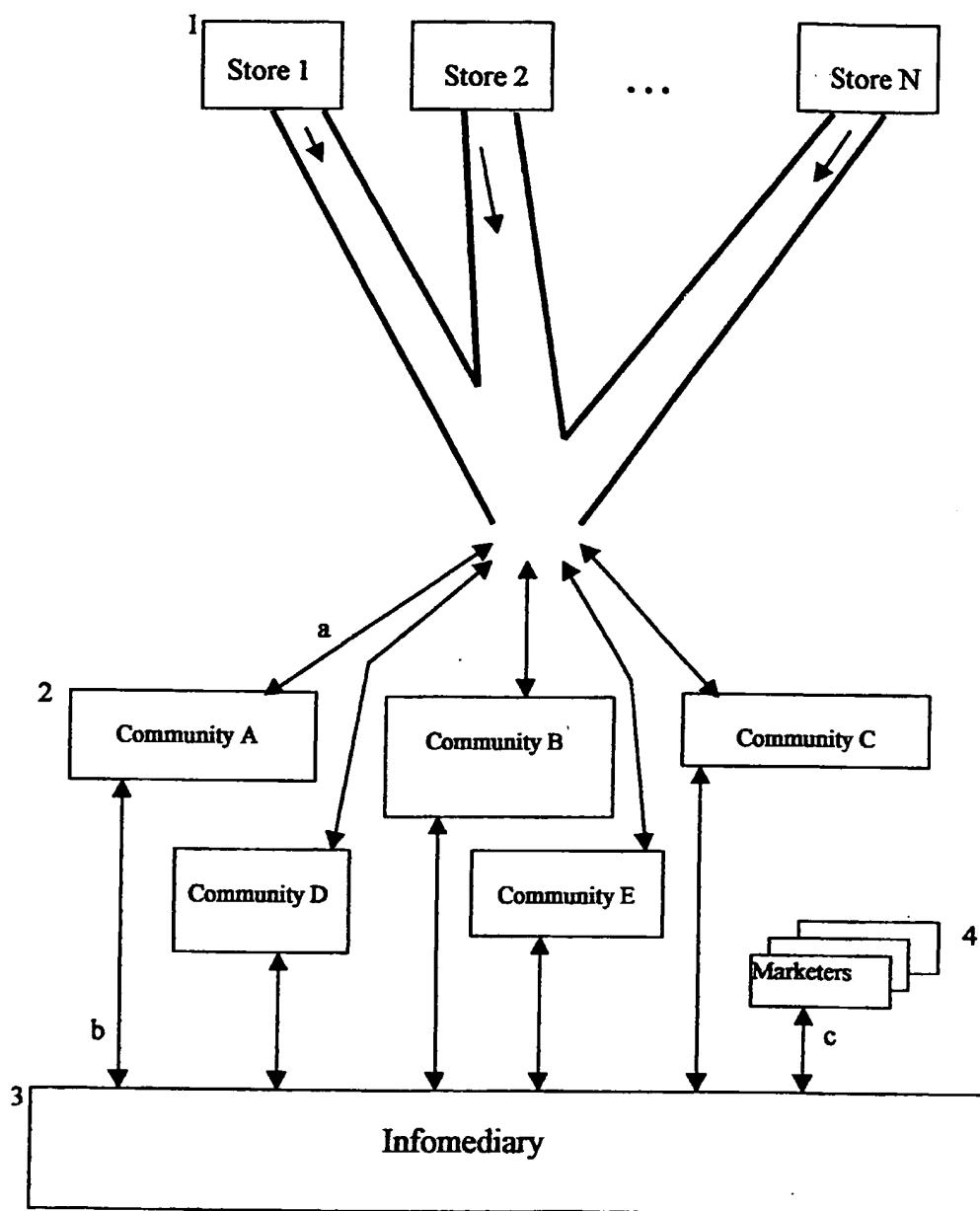


Fig. 49: Community Aggregation Using The Bonding Site

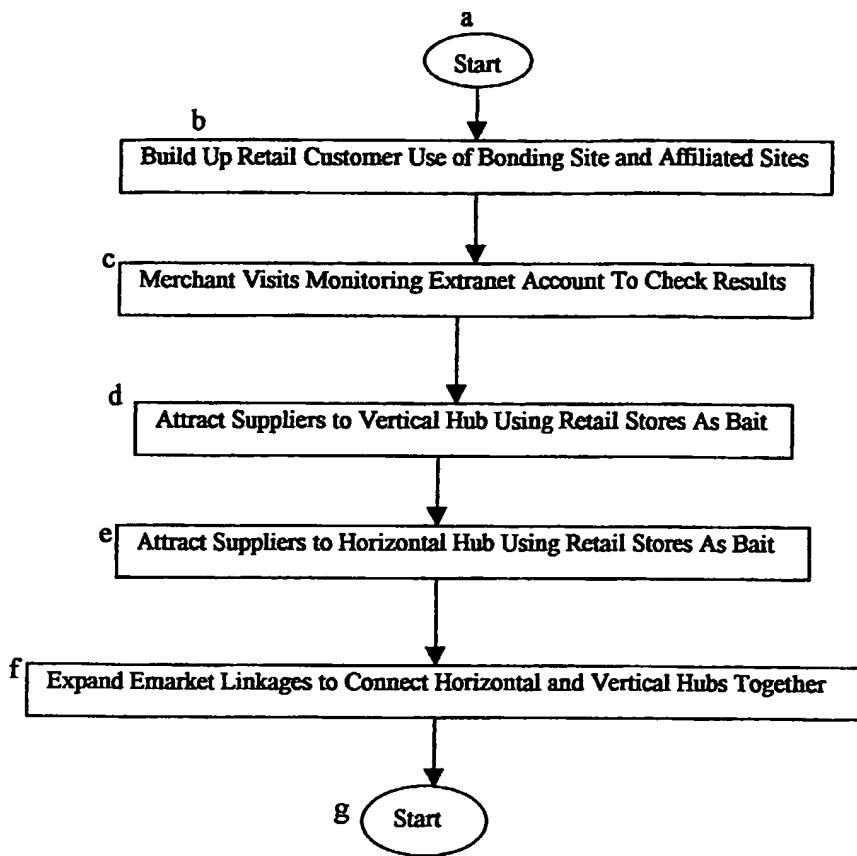


Fig. 50: Exemplary Framework Building Process

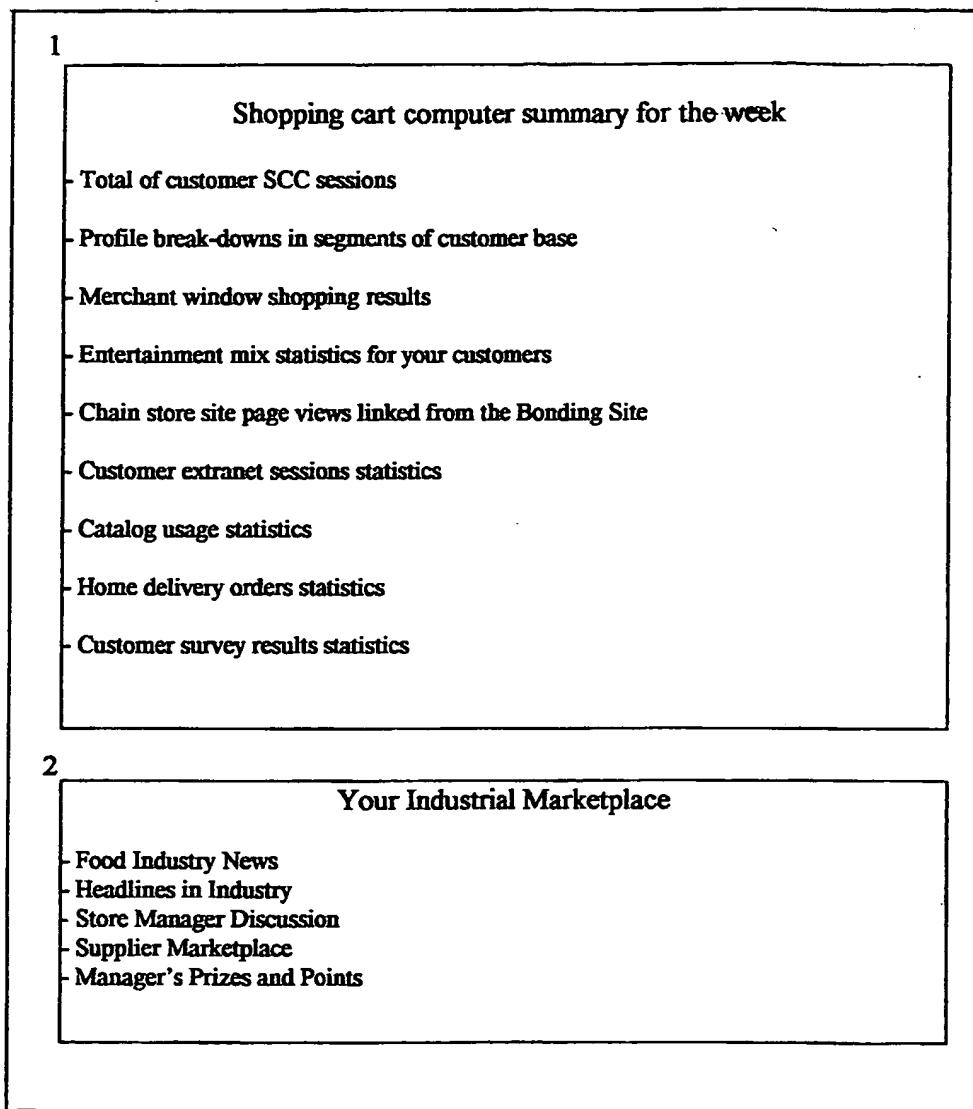


Figure 51: Exemplary Merchant Extranet Screen

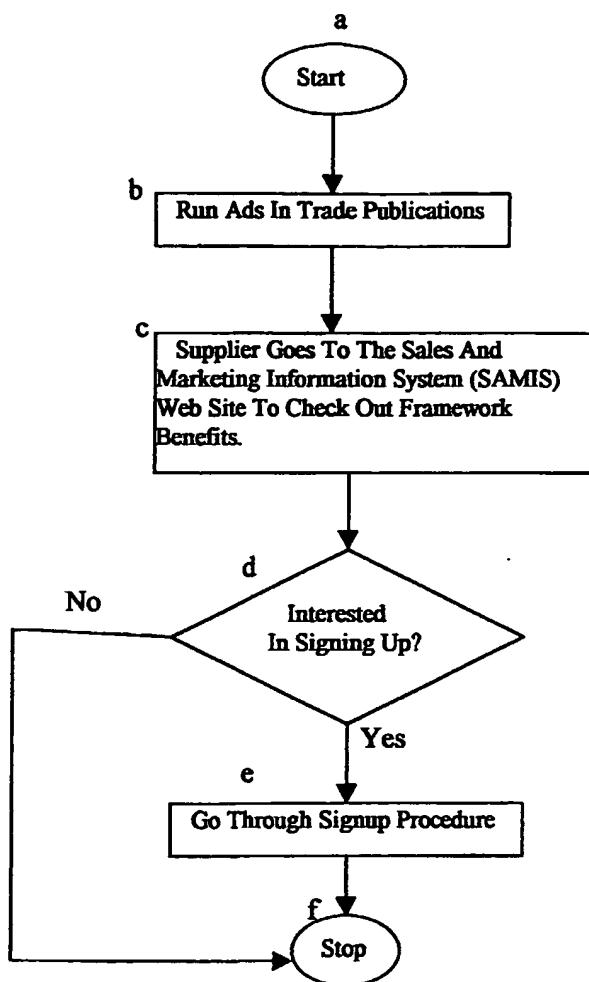


Fig. 52: Exemplary Process To Attract Suppliers To The Framework

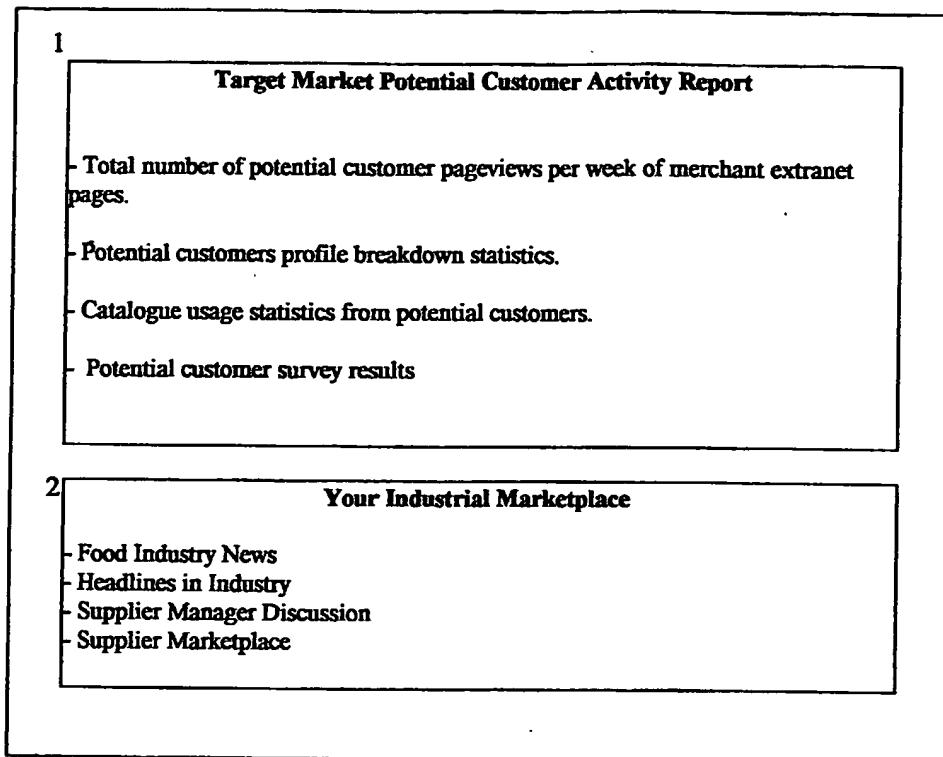


Fig. 53: Exemplary Supplier Extranet Screen

1

**Web Store**

2

**Merchant Window**

4

**Fulfillment House Catalog**

3

**Catalog to Al's Grocery**

- Products available in the store
- Auxiliary or complementary products not available in the store
- Information regarding the products
- Customization of your order
- Special delivery
- Speak to a service representative

5

**Infomediary Window**

- Choose an Infomediary of your choice to get you the product or service you want at a good price.
- Deals in North Alabama

6

**Portal Window**

- Excite
- Yahoo!
- AltaVista

Fig. 54: Exemplary Web Store Screen

1	2	3	4	5	6	7	8
9	10	11	12	13	14	15	16

Fig. 55: Exemplary Identification Key

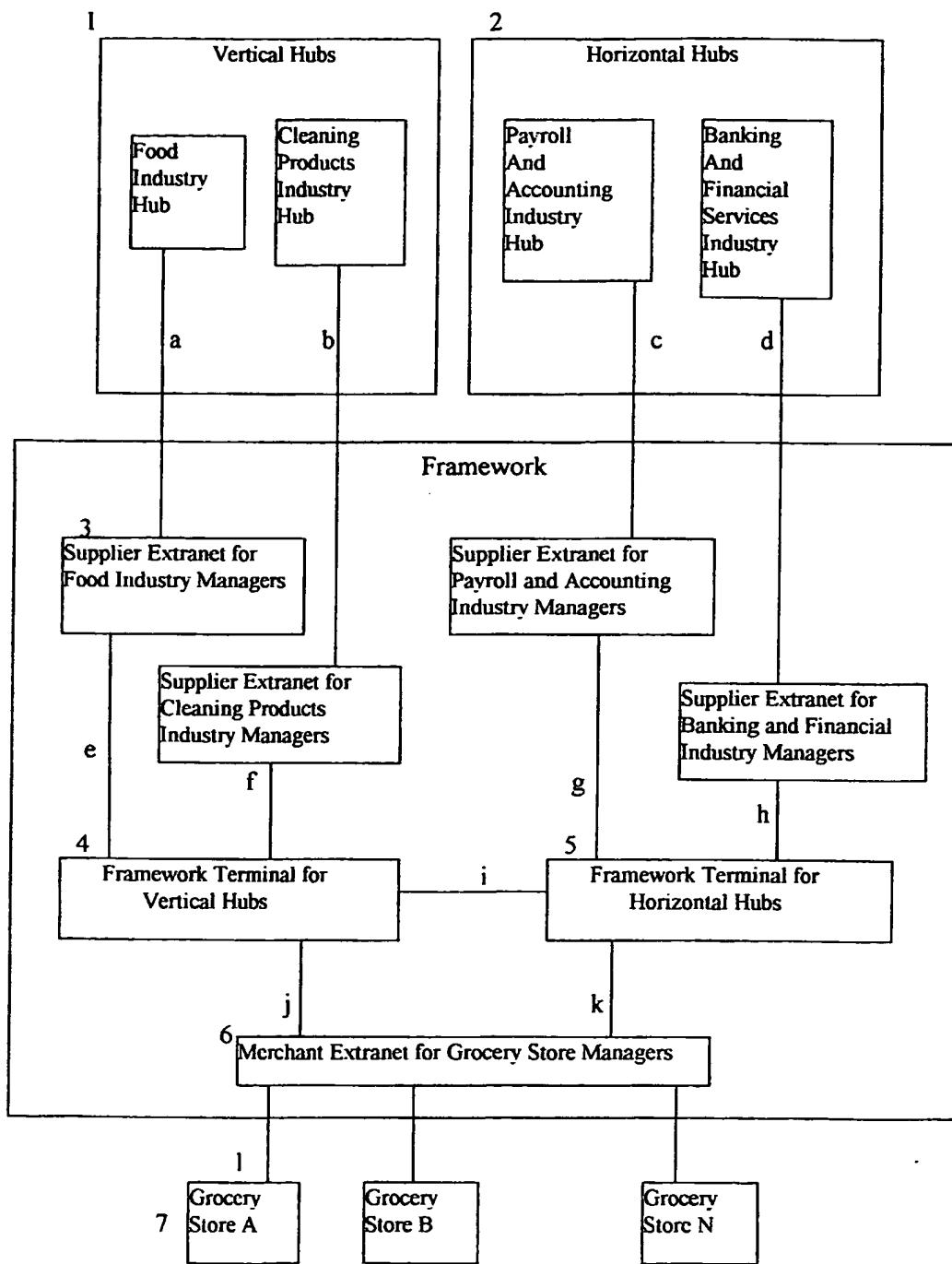


Fig. 56: Exemplary Framework Infrastructure

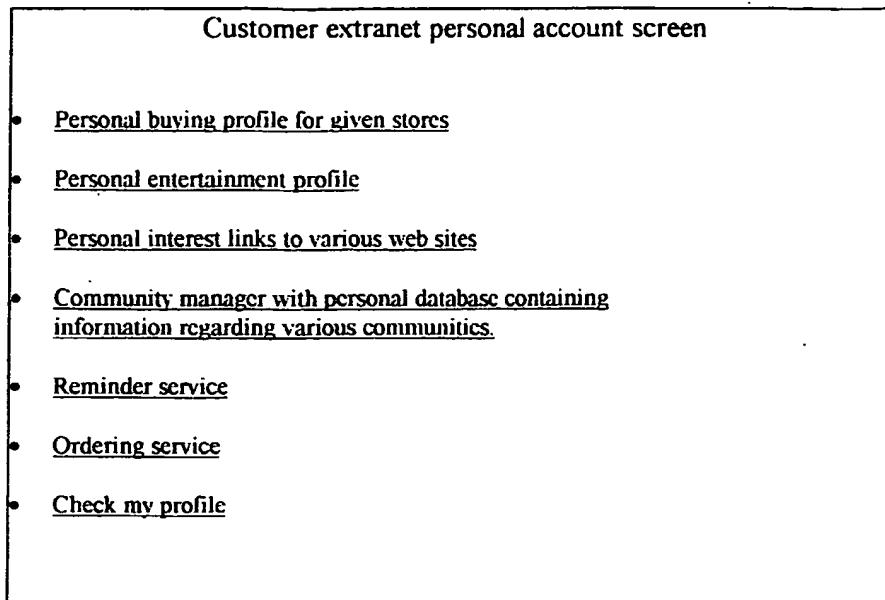


Fig. 57: Exemplary Embodiment of a Customer Extranet Screen

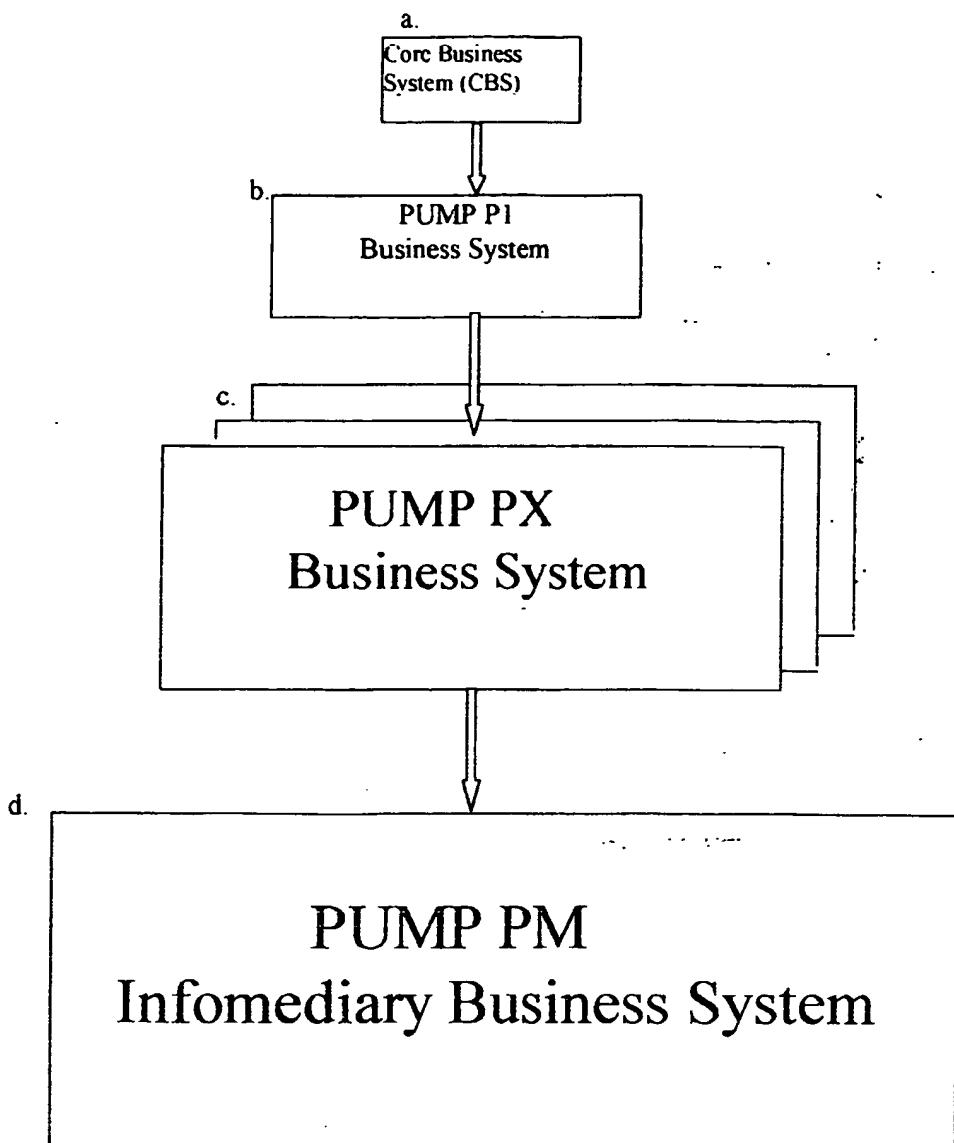


Fig 58: Portal User Magnet Process (PUMP) Business System Lifecycle

## INTERNATIONAL SEARCH REPORT

International application No. PCT/US00/28068
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**A. CLASSIFICATION OF SUBJECT MATTER**

IPC(7) : H04-6 G06F17/60  
 US CL : 705/14

According to International Patent Classification (IPC) or to both national classification and IPC

**B. FIELDS SEARCHED**

Minimum documentation searched (classification system followed by classification symbols)

U.S. : 705/14

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practicable, search terms used)

East text search (US Pat) search concepts: shopping carts, affiliates, referrals, incentives programs, internet shopping, URL's

**C. DOCUMENTS CONSIDERED TO BE RELEVANT**

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
Y	US 6,014,634 A (SCROGGIE et al), 11 January 2000, abstract, entire document	1-60
Y	US 5,933,811 A (ANGLES et al), 03 August 1999, abstract, entire document	1-60
A	US 6,035,281 A (CROSSKEY et al), 07 March, 2000, abstract, entire document	1-58
A	US 6,012,039 A (HOFFMAN et al), 04 JANUARY 2000, abstract, entire document	1-60

Further documents are listed in the continuation of Box C.  See patent family annex.

* Special categories of cited documents:	"T"	later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention
*A* document defining the general state of the art which is not considered to be of particular relevance	"X"	document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone
*E* earlier document published on or after the international filing date	"V"	document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art
*L* document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)	"&"	document member of the same patent family
*O* document referring to an oral disclosure, use, exhibition or other means		
*P* document published prior to the international filing date but later than the priority date claimed		

Date of the actual completion of the international search  13 DECEMBER 2000	Date of mailing of the international search report  26 FEB 2001
Name and mailing address of the ISA/US Commissioner of Patents and Trademarks Box PCT Washington, D.C. 20231 Facsimile No. (703) 305-3230	Authorized officer  JAMES TRAMMELL Telephone No. (703) 305-3900  <i>Peggy Hanrahan</i>